



MOTORHOME INFORMATION MANUAL



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MANUAL MUST BE LEFT IN THE MOTORHOME

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GENERAL DISCLAIMER

INTRODUCTION

Congratulations! You have chosen to embark on a fun-filled way to see the USA and beyond! We at ACE RV are committed to making your vacation as fun and trouble-free as possible. This manual will serve as instruction and trouble-shooting guide for each of the systems in our motorhomes, in addition to our toll free Roadside assistance, in the event of questions or an unforeseen malfunction. Please leave this manual in the motorhome. Lost or damaged manuals are subject to a charge upon return.

Please read the manual carefully. If this is the first time that you are renting an RV or even if you are a repeat renter, you may have some questions once you depart that this manual can address. You may also find that some things are mentioned more than once. That is because they pertain to multiple systems, and in addition, some things just bear repeating. Our motorhomes are longer, wider and higher than the vehicles you normally use, but in just a few short miles you will see that they are easy to drive!

Based on the changes in models from year to year, we cannot precisely describe every motorhome individually, but the systems and functionality are very similar if not the same. We provide this manual as a guide. Please read the following information thoroughly. It will help you avoid problems and enjoy your vacation!

In the unlikely event that you require Roadside support, please call us directly at:

703-944-6176 and one of our helpful agents will be happy to assist you.

In the unfortunate event of an accident, however minor, please call the same toll free number as soon as possible. Whenever you call, please have your contract number or your key number (the 5 digit number on your key chain) available so that the Roadside Agent may look up your contract information.

GENERAL PRECAUTIONS & RECOMMENDATIONS

When you are at the wheel of a motorhome, think “bus”. Remember that the vehicle you are driving is higher, wider, longer and heavier than the vehicles you drive every day. This means that special attention needs to be given to turning and stopping, as well as what is above you. Be sure to leave plenty of space between you and the vehicle in front of you as stopping times and distances are greater with the increased weight. In addition, when turning a corner, pay special attention to the rear end of the vehicle. It swings out in the direction opposite of the turn.

- **Avoid backing up.** If you must do so, then have someone guide you back with hand

signals.

- Pay attention to the height of the motorhome. Most of our motorhomes are approximately 11 ½ ' or more in height. **You should only drive under structures that have a minimum 12' (3.7m) clearance.** If you are unsure about the height of a structure, it is best to err on the side of caution and not drive under it.
- Always avoid parking structures, old gasoline stations and drive-thru restaurants. In campgrounds and on the edge of the road, watch for overhanging limbs.
- As stated above, remember that a heavy vehicle takes longer to stop. Keep a good distance between you and the vehicle in front of you. This will also reduce the likelihood of damage to the windshield due to pebbles and stones thrown up off the road. When you are overtaking another vehicle, remember that you need more time and space than a passenger car.
- Wind warnings are to be taken seriously. In the mountains and the desert there are sometimes sudden gusts that can push you out of your lane or even overturn the vehicle. If you see wind warnings, reduce your speed and hold the wheel with both hands.
- Do not let the vehicle idle longer than ten minutes at a high RPM. It is okay to idle at a normal idle RPM for a longer time to recharge the batteries.
- Do not park, idle or operate your vehicle or generator in tall, dry grass, or other dry combustible ground areas. The heat generated by the engine and emission components could start a fire.
- When driving on two lane roads, be courteous to your fellow drivers. If you see that a few vehicles are starting to follow you due to your slower speed, pull over to the right at the first, safe turn out and allow them to pass. They will be appreciative!
- **Motorhomes are a favorite target of thieves. When leaving the motorhome, even for short periods, lock all doors and latch all windows. Do not leave tempting items like cameras, radios, etc. lying out where they can be seen. If you go out at night, close the curtains, hang the privacy screen and leave a light on inside. ACE RV is not responsible for personal items lost or stolen.**

ROADSIDE ASSISTANCE

In the unlikely event that you require Roadside Assistance, please call us directly at: **703-944-6176** and one of our helpful agents will be happy to assist you.

Please note: We will not reimburse you for new tires or any other items or repairs over \$75 which were bought without our permission. Read the section below on tires. If you should have to buy a new tire for any reason, call us first.

WHAT TO DO IN CASE OF ACCIDENT

In the unfortunate event of an accident, however minor, please call the Roadside Assistance toll free number as soon as possible. Always get a police report. Without a police report you will be responsible for any and all damages, regardless of who was at fault. Make sure that you get the other party's information: name, address, phone number, insurance information, vehicle license number, state of registration and write down all the details of the accident. When you call, please have your contract number or your key number (the 5 digit number on your key chain) as well as the aforementioned information available so that the Roadside Agent can look up your contract information. They will give you instructions as to how to proceed. An accident report will be provided and must be completed upon your return.

Conversion Table

This will assist our International customers in converting various measures.

Measure	Equals
Distance:	
1 Kilometer	.62 miles
1 mile	1.6 kilometers
1 meter	3.28 feet
1 foot	.3 meters
Temperature: Formula: Fahrenheit minus 32 divided by 1.8 = Celcius	
For Example...	
75 degrees Fahrenheit	24 degrees Celcius (75-32=43 / 1.8 = 23.89)
70 degrees Fahrenheit	21 degrees Celcius
65 degrees Fahrenheit	18 degrees Celcius
Oven Temperatures:	
325 degrees Fahrenheit	163 degrees Celcius
350 degrees Fahrenheit	177 degrees Celcius
375 degrees Fahrenheit	191 degrees Celcius
400 degrees Fahrenheit	204 degrees Celcius
Liquid:	
1 gallon	3.8 litres
1 litre	.3 gallons
Speed: (adding 5 mph = adding 8 kph)	
45 miles per hour	72 kilometers per hour
40 miles per hour	64 kilometers per hour
35 miles per hour	56 kilometers per hour

System/Amenities Table

This will outline the capacities of the various systems and amenities in both types of motorhome. Note: capacities listed are a range and will depend on the model of the motorhome class that you have rented.

System/Amenity	Class C 22 to 31'	Class A 29 to 36'	Funmover
AUTOMOTIVE			
Chassis	Ford/Chevy	Ford/Chevy	Ford
Gasoline Engine Fuel-Injected (litres)	6.8 to 7.4	7.5 to 8	6.8
4 speed Overdrive transmission	YES	YES	YES
Factory Cruise Control	YES	YES	YES
Power Steering & Brakes	YES	YES	PWR STEERING ONLY
Factory Cab Air	YES	YES	YES
Factory Roof Air-Ducted	YES	YES	YES
ELECTRICAL			
Generator	YES	YES	YES
Auxiliary Battery	YES	YES	YES
AM/FM Radio with cassette or CD	YES	YES	YES
12V Interior lighting	YES	YES	YES
INTERIOR			
Interior height	79 to 83 in. or 197 to 206cm	79 to 81in. or 197 to 207cm	79 in. or 197 cm
Interior width	92 to 96 in. or 234 to 244 cm	90 to 96 in. or 229 to 244 cm	96 in or 244 cm

BED SIZE			
Cabover – length	74 to 80 in. or 188 to 203 cm	n/a	74 to 80 in. or 188 to 203 cm
Cabover – width	54 to 60 in. or 137 to 152 cm	n/a	54 to 60 in. or 137 to 152 cm
Cabover - clearance	27 in. or 69 cm	n/a	27 in. or 69 cm
Permanent – length	74 to 76 in. or 188 to 193 cm	74 in. or 188 cm	n/a
Permanent – width	52 to 60 in. or 132 to 152 cm	53 in. or 135 cm	n/a
Dinette – length	74 in. or 188 cm	74 in. or 188 cm	74 in. or 188 cm
Dinette – width	38 to 40 in. or 96 to 102 cm	37 in. or 94 cm	38 to 40 in. or 96 to 102 cm
Couch – length	68 to 76 in. or 173 to 193 cm	70 to 76 in. or 178 to 193 cm	n/a
Couch - width	40 to 42 in. or 102 to 107 cm	46 to 52 in. or 117 to 132 cm	n/a
KITCHEN & BATHROOM			
Wash basin	YES	YES	YES
Shower	YES	YES	YES
Toilet	YES	YES	YES
Water Heater	YES	YES	YES
Heater & Thermostat	YES	YES	YES
Kitchen sink	YES	YES	YES
Range (stove)	YES	YES	YES
Microwave	YES	YES	YES
Refrigerator	YES	YES	YES
TANK CAPACITIES			
Water Heater	6 gal or 23 ltr	6 gal or 23 ltr	6 gal or 23 ltr
Fresh Water	30 to 40 gal or 132 to 151 ltr	70 to 100 gal or 265 to 379 ltr	38 gal or 146 ltr
Black Water	23 to 25 gal or 87 to 95 ltr	30 gal or 114 ltr	27 gal or 103 ltr
Grey Water	21 to 30 gal or 79 to 114 ltr	30 gal or 114 ltr	31 gal or 119 ltr
Propane Tank	12 to 14 gal or 45 to 53 ltr	25 gal or 95 ltr	51 pounds
Gasoline Tank	36 to 56 gal or 136 to 212 ltr	75 gal or 284 ltr	55 gal or 211 ltr
CARGO AREA	n/a	n/a	8 x 8.5 Ft. (96 in. x 102 in.)

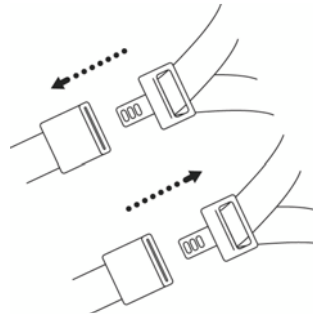


Chapter 1: Before You Leave

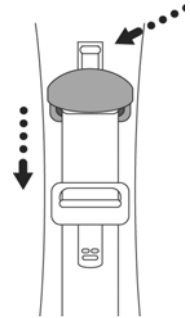
A. CABIN SAFETY, SEATS AND SEAT BELTS

All motorhomes come with at least 5 or 6 seat belts. This from the California Department of Motor Vehicles website on RV seatbelts: "Always wear your safety belt when driving. Even though many motorhomes accommodate passengers in places where safety belts are not required by federal law (e.g. dining table), if the area has a safety belt, wear it." Not using a safety belt increases the danger of injury in case of an accident. It is recommended that when not walking around in the cabin, to wear the supplied seatbelt. The driver and passenger seat are equipped with a seat belt which is mandatory and should be worn at all times. Use caution when walking around the cabin when the vehicle is in motion.

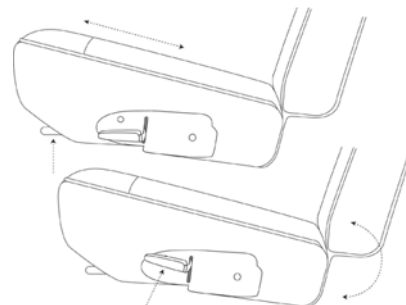
Simply insert the tongue of the belt into the opposing buckle until it snaps into place.



There is a height adjustment for the seatbelt that is located on the side just behind the seat. Move this lever so that the seat belt sits in the middle of your shoulder.



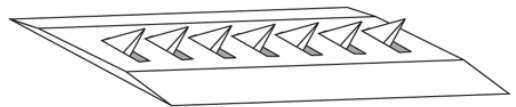
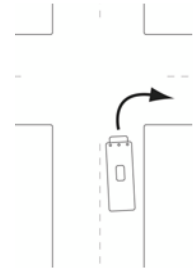
There are two seat adjustments on the driver's and passenger's seat. The bar under the front of the seat moves the seat forward and backward. The lever on the outer side of the seat moves the backrest portion of the seat forward and backward. For your safety, do not adjust the seat while driving.



B. SAFE AND COURTEOUS DRIVING

Rules of the road vary from state to state, but safety is always paramount! Please review the following tips to help insure a safe and happy trip:

1. Drive at the posted speed limit. Excessive speed not only increases fuel consumption, but also increases the likelihood of an accident.
2. As stated previously, wind warnings are to be taken seriously. In the mountains and the desert there are sometimes sudden gusts that can push you out of your lane or even overturn the vehicle. If you see wind warnings, reduce your speed and hold the wheel with both hands.
3. When driving in the mountains, keep your speed within safe limits. **Avoid continuous use of the brakes.** Brakes can overheat from extended use. When descending a steep hill, it may be necessary to downshift to avoid riding the brakes.
4. Never carry extra gasoline inside the vehicle.
5. When traveling in winter, carry chains. Make sure the chains are the correct size for the size of tires installed on the motorhome.
6. When driving on two lane roads, be courteous to your fellow drivers. If you see that a few vehicles are starting to follow you due to your slower speed, pull over to the right at the next safe turn out and allow them to pass. They will appreciate it!
7. When entering toll booths, always use the truck lanes.
8. Always be aware of the size of the motorhome – length, height, and width. Remember, when making turns, you need to make a wider turn to avoid hitting something with the back end. Motorhomes have a much wider turning radius.
9. Driving at a steady speed will save fuel.
10. Always observe posted speed limits. Remember, you are responsible for any moving violations or parking tickets.
11. When backing up, always use a spotter. It is always advisable to pull into a space that you can drive forward out of. When you can't do this, use a spotter.
12. When changing lanes, be aware of your blind spots. Leave extra room between you and the car you're pulling in front of.
13. Don't drive while tired. Driving a motorhome requires your full attention!
14. **Don't Tailgate! Motorhomes take much longer to stop than a car.**
15. Do not drive across tire spike strips going the wrong direction! If the spikes are pointed towards you BACK UP!! You will have one or more flat tires if you drive forward.



C. DRIVING IN THE MOUNTAINS

Keep your speed within safe limits. **Avoid continuous use of the brakes.**

Brakes can overheat from extended use. When descending a steep hill, it may be necessary to downshift to avoid riding the brakes. (Also refer to the section on the transmission)

If the engine should overheat, take the following steps:

1. Pull off the road, turn off the dash air conditioner, but leave the engine running. Shift into (P)ark and turn the heater on and set the temperature to maximum heat. Increase the RPMs moderately. The temperature should go down.
2. **Do not** shut the engine off. **Do not** remove the radiator cap until absolutely necessary, and then **ONLY** when the engine is cool.
3. If the engine does not cool off or you think that there is no fluid in the radiator, shut the engine off.
4. **Do not add any fluid to the radiator when the engine is overheated.** This may cause the engine block to crack. Let the engine cool down before adding fluid, and let the engine run while you do so. (See the section below on Oil and Other Engine Fluids for instructions on removing radiator cap.)

D. RESTRICTED AREAS

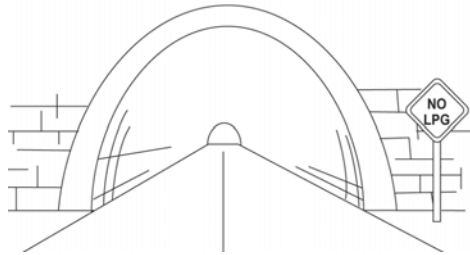
Clients are restricted from traveling to certain regions due to road conditions, extreme weather and/or availability of support. Restrictions are subject to change due to changing road conditions, weather, etc. Clients should inquire at the rental station for all restricted areas and roads for their intended itinerary.

Please note the following restrictions:

1. Off-road driving (non-public or "logging" roads) is not permitted.
2. Travel in Death Valley is not permitted in July and August. In June and September travel is permitted, however, customer is fully responsible for any and all mechanical problems and/or towing. Ground temperatures can reach 140 degrees Fahrenheit or 60 degrees Celsius.
3. Travel to Alaska or Northern Canada is permitted at client's own risk. In addition, there is no reimbursement for repairs or lost use.
4. Travel into Mexico is permitted at client's own risk and proof of insurance.
5. Travel on the Apache Trail in Arizona is not permitted.
6. Travel to New York City and through surrounding tunnels is not permitted.



7. Travel during the winter months is permitted. However, as a precautionary measure, water may be replaced by a specialized antifreeze to prevent water systems from freezing. Customers must plan on using bottled water. Special instructions may be given at the rental station.



E. ROAD SIGNS

The following information is from the Department of Motor Vehicles:

The shape of a sign gives you an indication about the information contained on the sign. Here are the common shapes used:

*The eight-sided red **STOP** sign* means that you must make a full stop before entering a crosswalk or at a white "limit line." A limit line is a wide white line painted on the street. When a crosswalk or limit line is not marked, stop at the corner.



On divided highways, a **STOP** sign for crossing or turning vehicles is often placed on the island or dividing strip. You must also stop there.

*The three-sided red **YIELD** sign* means slow down, be ready to stop, and let traffic (including people walking or riding bikes) pass before you go proceed.



The square red and white regulatory signs tell you about regulations you must follow.

For example, the **DO NOT ENTER** sign tells you vehicles will be coming toward you, usually on a freeway off ramp or a one-way street.



The **WRONG WAY** sign may be posted with the **DO NOT ENTER** sign. If you see one or both of these signs, drive to the side and stop. You are going **against** traffic. When safe, back out or turn around and go back to the road you were on. (At night, road reflectors will shine red in your headlights when you are going the wrong way.)



A red circle with a red line through it always means NO. The picture inside the circle shows what you cannot do. The sign may be shown with or without words under it.



A circular sign tells you of an approaching [railroad crossing](#). (More information about [Special Speed Limits](#).)



A five-sided sign tells you a [school](#) is nearby. (More information about [Special Speed Limits](#).)



A four-sided, diamond shaped sign warns drivers of specific road conditions and dangers ahead. Most, but not all, warning signs are diamond shaped. All warning signs must be obeyed.

A white rectangular sign tells you about important rules you must obey.

Examples of Red and White Regulatory Signs



Examples of Guide Signs



Examples of Warning Signs



Slippery When Wet



Merging Traffic



Divided Highway



Curve



Lane Ends



End Divided Highway



Traffic Signal Ahead



Pedestrian Crossing



Crossroad



Curve

Examples of White Regulatory Signs



Examples of Highway Construction and Maintenance Signs



F. FUEL AND PROPANE (LPG)

You will receive your motorhome with $\frac{3}{4}$ to a full tank of gas, and a $\frac{2}{3}$ tank of propane (LPG). Propane is filled to $\frac{2}{3}$ full because of state and federal regulations. This is the maximum that a propane tank may be filled. Although the propane does not need to be refilled when you return, the gasoline should be filled to the level at which you picked it up, or you will be charged the then-current ACE RV rate for gasoline to refill it.

The engine runs on regular **unleaded** gasoline except in the case of the Diesel Pusher model. **Do not put leaded gasoline in the fuel tank.** If you should put leaded fuel in the fuel tank, it will ruin the catalytic converter in the engine, and you should not proceed any further. Call Roadside Assistance before continuing your trip. Our vehicles only require 87 octane fuel.

The fuel receptacle is located on the driver's side on Class C models. On most Class A models, it is located in the rear behind the license plate.

The generator runs off the same fuel tank as the engine and uses the same unleaded gasoline. You should keep at least a half tank of gasoline whenever you want to run the generator. Gasoline levels below $\frac{1}{3}$ to $\frac{1}{4}$ tank will result in the generator not starting, or if running, shutting off.

The size of the fuel tank and gasoline usage depends on the model.

Camperhome:	36 gallons (137l)
18-25' models:	35 gallons (132l)
26-29' models:	55 gallons (208l)
Class A models:	75 gallons (285l)

Gasoline usage also depends on the model:

Camperhome:	8 – 10 mpg	(23 – 29l /100km)
18-22' models:	8 – 10 mpg	(23 – 29l /100km)
23-25' models:	7 – 9 mpg	(26 – 33l /100km)
27-29' models:	6 – 8 mpg	(29 – 39l /100km)
Class A models:	6 – 8 mpg	(29 – 39l /100km)

These are approximations; how and where you drive also affect the miles per gallon. **ACE RV makes no claims as to gasoline consumption.**

Propane runs various features of the motorhome, such as the stove, hot water heater, furnace and the refrigerator. The functionality of these as well as operation of the LPG system will be discussed in a later chapter.

WARNING: All propane-supplied systems, as well as the propane valve MUST be turned off before entering a gas station!

The following things should be done while stopping for fuel:

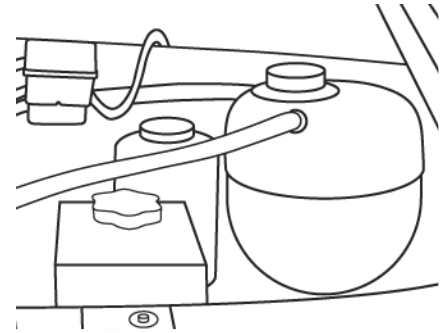
- a. Check all fluids.
- b. Check the air pressure in the tires. Refer to the manufacturer's sticker located in the driver's side door for the recommended pressure for your vehicle. Pressure figures on the sticker are for tire pressure when the tire is cold (driven less than 2 miles or when the unit is parked for more than 2 hours).
- c. Check the oil in the generator. It will use the same oil as the engine compartment, 10W-30.
- d. Check for leaks under the vehicle.
- e. Check and adjust side mirrors if necessary.

G. OIL AND OTHER ENGINE FLUIDS

Oil:

Every time you get gasoline you should check the motor oil in the engine compartment. In Class C models, the hood release is on the left side under the dashboard. Before you leave, ask where the dipstick is. **Our motorhomes**

use 10W-30 motor oil. Save any receipts you receive when you have to add oil, we will reimburse you. Oil and filter changes are required every 3000 miles. We recommend national chains such as Jiffy Lube for oil changes, or a service shop that regularly services RVs. The typical oil changes should cost you approximately \$35. We will reimburse you for the oil change upon return with the presentation of a receipt. If you are unsure as to whether or not you should have the oil and filter changed, please call Roadside Assistance for help.



Transmission Fluid:

This should be checked at each fill-up. If your vehicle is leaking transmission fluid, this can point to a serious problem with the transmission. Please call Roadside Assistance right away. It is not enough simply to keep adding transmission fluid. Our vehicles take Dextron III type transmission fluid for Chevy chassis or Mercon for Ford chassis.

Engine Coolant:

The engine coolant level should be checked at the coolant recovery reservoir. If engine coolant needs to be added, use Dex-Cool anti-freeze/coolant, which can be found at most auto parts stores or service stations.

Do not remove the radiator cap as you may sustain burns or other injury! If necessary, add the proper engine coolant mixture into the recovery reservoir. If the recovery reservoir is empty, follow these steps to avoid injury:

- (1) Turn the engine off and let it cool completely.
- (2) When the engine is cool, wrap a thick cloth around the cap and slowly turn the cap to the first stop allowing the pressure to release.
- (3) Step back and let the pressure release.
- (4) When all pressure has released, use the cloth to press the cap down and remove it. Avoid the radiator opening as steam or hot engine coolant may blow or splash out. Do not add coolant or water to a hot engine; this may cause the engine block to crack. If the loss of coolant is due to a leak or other malfunction or you have any related questions, please call Roadside Assistance for help. You can add plain water to the system in the case of an emergency. You must however, have the cause of the leak repaired and the proper coolant mixture replaced as soon as possible. In no event should the vehicle be driven without the engine cooling system being full with fluid.

Brake Fluid:

You should normally not need to check the brake fluid, but if you experience poor brake performance, this should be checked as soon as possible. The brake fluid is found in a small, round, plastic container under the hood on Ford chassis vehicles. On Chevy chassis vehicles, the brake fluid is in a metal container located behind an access hole inside the driver's side wheel well. If you need to add brake fluid, use a DOT 3 type fluid. If you continue to lose brake fluid, it is not enough simply to keep adding more. Please call us for assistance. If you are still having poor brake performance and you know the brake fluid reservoir is full, please do not drive any further. Contact Roadside Assistance immediately.

Power Steering Fluid:

If you hear a loud grinding noise when you turn the steering wheel, it is possible that the power steering fluid is too low. Check this at the power steering reservoir found under the engine hood of all models. If there is a leak in the system, the vehicle can be driven short distances. The steering will function, but will require much more effort on the part of the driver. In the event of a steering fluid leak, please call Roadside Assistance. To add power steering fluid, a generic power steering fluid is sufficient.

H. CONVENIENCE KITS, KITCHEN KITS AND OTHER ITEMS

Your vehicle has been stocked with a full tank of propane, toilet chemicals and a roll of toilet paper, also known as a starter kit. When purchasing additional toilet paper, please purchase RV toilet paper, or if this is not available, one-ply toilet paper will work as well. Please do not use more than one-ply toilet paper as it will definitely clog the toilet plumbing.

At all company-owned locations, you may also rent:

Personal convenience kit: Includes: 2 Blankets; 2 Sheets; Pillow; 2 Pillow Cases; 2 Hand Towels; 2 Bath Towels; 2 Wash Towel; 2 Dish Towels; Cereal Bowl; Dinner Plate; Saucer (Salad Plate); 2 Glasses (12oz); Coffee Cup; Silverware Set (Fork, Spoon, Knife)

Kitchen kit: Includes: Kettle/Cover; 1qt. Sauce Pan/Cover; 2qt. Sauce Pan/Cover; 6qt. Dutch Oven; Frying Pan; Coffee/Tea Pot; Vegetable Bowl; Platter; Water Pitcher; Strainer; Potato Peeler; Can Opener; Corkscrew; Cutlery Tray; 4pc. Cutlery Set; Wastepaper Basket; Toilet Brush w/ holder; Broom, Mop & Bucket; 2 Clothes Hangers; 2qt. Micro Bowl



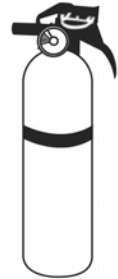
Chapter 2: Things You Need To Know

A. SAFETY EQUIPMENT

The safety of you and your family is of utmost importance to ACE RV. For that reason, every motorhome is equipped with a fire extinguisher, an LPG (propane) detector, a smoke alarm and a carbon monoxide detector.

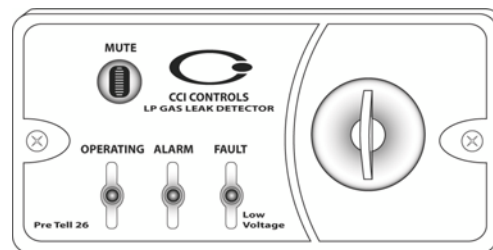
1. Fire extinguisher: All motorhomes have a dry chemical fire extinguisher rated for both Type B (liquids and grease) and Type C (electrical) fires. It is near the side cabin door.

To use the fire extinguisher, point the nozzle at the base of the fire, pull the ring located at the top of the extinguisher and squeeze the lever. Move the extinguisher in a back and forth motion covering the entire base of the fire until the fire is out.



2. LPG (propane) detector:

All of our motorhomes have a propane gas leak detector. It is typically located about 3 inches above the floor, usually near the side door or in the kitchen area. We consistently check our motorhomes for LPG leaks, however, if a leak should occur and LPG enters the inside of the motorhome, the alarm will sound. LPG is heavier than air and will concentrate in a layer on the floor until it reaches the LPG detector.



On most models, the LPG detector is both an alarm and an automatic main cutoff for LPG. When the alarm sounds, the LPG supply to the vehicle is shut off. If the alarm should sound, push the black switch down into the OFF position, open the windows and exit the motorhome when safe to do so to allow the cabin to air out. When you feel it safe to re-enter, try to find out what is wrong. If all seems okay, put the switch back into the **ON** position. The alarm will beep for 30-60 seconds and then stop and a green light will begin blinking. Now you can use the LPG system again.

On Ultrasport models, the LPG alarm is located below the rear bed. If it should be triggered, it does not automatically shut off the LPG supply. In this model, you would have to go to the outside compartment and close the main valve manually. Reset the alarm by pushing the button on the detector.

The alarm is sensitive to exhaust, so that if the side door is open and the engine is running, the alarm can go off. It is also sensitive to various solvents, such as those found in glue and hair spray, for example. If it is very hot in a new motorhome, the solvents in the glue can evaporate, which under some circumstances can make the alarm go off. The alarm is also sensitive to surges in power, so it can be set off when you start the engine or the generator.

The LPG detector is powered by the auxiliary battery. It draws less current than drawn by one monitor panel lamp. The detector will operate to detect gas and continue your gas service until the auxiliary battery is drained as low as 9 volts. (The **LOW** battery light indicates 10.4 volts.) When the battery has less than 9 volts charge, the gas will be turned off. The only way to reset the detector and restore the gas service is to bring your auxiliary battery back up to at least 11 volts by running the engine for 20 to 30 minutes.

3. Smoke Alarm:

All motorhomes have a smoke detector that is powered by a replaceable 9-volt battery. It will make a “chirping” sound when the battery needs to be replaced. The smoke alarm is round and located on the ceiling of the motorhome.



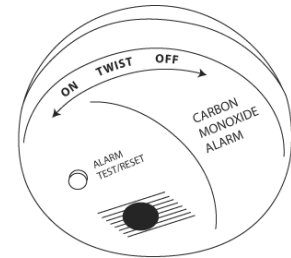
Should you need to replace the battery, follow these steps:

- a. Remove the alarm by twisting the case in a counter-clockwise motion.
- b. Remove and discard the used battery.
- c. Install the new battery.
- d. Check to make sure that the battery is seated properly. You can test the alarm while it is off the mounting bracket by pushing the test button.
- e. Reinstall the alarm by twisting the case in a clockwise motion.
- f. Re-test the alarm.

4. Carbon Monoxide Detector:

All motorhomes come equipped with a carbon monoxide detector to detect unsafe levels of carbon monoxide. If the alarm sounds take the following steps:

- a. If you are driving, open all the windows until the driver can come to a safe place to stop.
- b. Once you are able to stop, shut the engine off, and the generator if running, and exit the vehicle.
- c. Allow the vehicle to ventilate, then search for the source of the carbon monoxide, such as generator exhaust.
- d. Do not re-enter the vehicle until you have determined that it is safe to do so. Call Roadside Assistance for help in determining whether it is safe to re-enter.



When running the generator, it is best to keep the windows nearest to the generator closed, to prevent excess carbon monoxide from entering the cabin.

Like the smoke detector, the carbon monoxide detector will “chirp” when the 9-volt battery is low.

Should you need to replace the battery, follow these steps:

- a. Remove the alarm by twisting the case in a counter-clockwise motion.
- b. Remove and discard the used battery.
- c. Install the new battery.
- d. Check to make sure that the battery is seated properly. You can test the alarm while it is off the mounting bracket by pushing the test button.
- e. Reinstall the alarm by twisting the case in a clockwise motion.
- f. Re-test the alarm.

5. Emergency Exit: Each motorhome has an emergency exit which is located at the rear of the motorhome marked with a sign that says **EXIT**. Simply open the window and exit the motorhome. You can also exit the motorhome by the side door or the two front cabin doors if it is safe to do so.

B. TIRES

When you purchase gasoline, check your tires: make sure they are not too hot and not flat. If you think that the pressure is not correct, check this too. Note: the most accurate readings are obtained when the vehicle has been parked for a period of time and the tires are cool. Placards on each vehicle indicate the recommended tire pressure. On Ford chassis the sticker is on the driver's door. On Chevy chassis the placard is on the wall next to the driver's seat. In no case should the tire pressure, when cold, exceed what is imprinted on the tire itself. It is very important that you check the pressure in the summer or when driving through a desert. Over or under inflation can affect the steering, gas mileage and could in some cases, cause blow-outs.

All our tires are checked and are safe for your trip. Occasionally, cracks can be seen on the outside of the tire. The cracks arise from heat or cold and do not affect the performance of the tires. Our tires are 8 ply, that is, they have 8 layers. Cracks never go through the first layer.

Should you, for any reason, have to buy a new tire, call us before doing so. **We will not reimburse you for the cost of any tires that we did not authorize.** Also, in general, the customer is responsible for damage done to tires caused by road hazards, such as rocks in the road, hitting a curb or using the motorhome on unpaved roadways. When replacing a tire, be sure to get one of the same size (and preferably the same make) as those already on the vehicle. Any size substitutions should only be made in extreme emergencies, when no other tire is available. Always get radial tires rated 8-ply (or more).

Warning! Unfortunately we have had the experience that certain gasoline stations, tire shops and other service centers attempt to sell our customers tires and other things that they do not need, just to make a sale.

Their method is usually something like this: The pump attendant or mechanic points to a cracked place in the tire and contends that this is a life-threatening defect. They try to play on customers' fears about safety in order to sell you more than you need. Please be aware of their tactics and use your judgment as well as have our Roadside Assistance department speak with them directly. They must approve any repairs over \$75. Our Roadside group will always do what is right for your safety.

C. SPARE TIRE

Should you have a flat tire, DO NOT attempt to change the tire yourself. We do not provide jacks or wrenches for tire changes. Please call Roadside Assistance first, in the event of a flat tire. In the event you cannot reach a Roadside agent, please call a towing company or other road service for assistance.

In some motorhomes, the spare tire is mounted on the back of the vehicle. In others, it is located underneath the rear section of the motorhome, or, as in some Class A units, under the floor inside a storage compartment.

D. THE SIDE STEP

All our motorhomes have a step under the side door. This must be in the storage position when the vehicle is in motion. Never move the vehicle when the side door is open or when the step is extended. In Class A motorhomes, the step operates automatically when opening and closing the door. Make sure that there are no obstacles in the way of the step before opening the door. On the dashboard is a switch that must be in the ON position so that the step can extend out. There is also a switch just inside the side door.

E. SMOKING POLICY

For the comfort of all of our customers, ACE RV does not allow smoking in any of our motorhomes. We appreciate your understanding and cooperation.

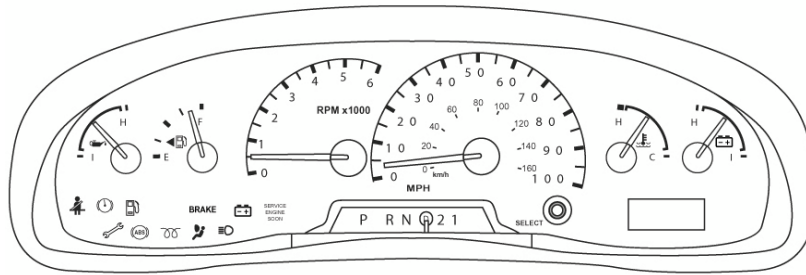




Chapter 3: The Driver's Cab

A. THE DASHBOARD

The layout of the dashboard of the motorhome varies from model to model, but the instrumentation is typically the same.



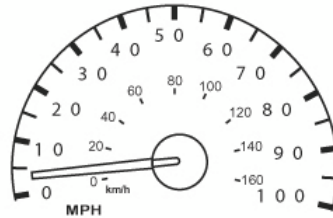
Directly in front of the driver's seat are the following instruments and controls:

1. Ignition Switch
2. Speedometer with trip odometer
3. Oil pressure indicator
4. Engine temperature indicator
5. Gasoline (fuel) gauge
6. Battery condition gauge
7. Headlight control
8. Emergency start switch
9. Turn signal lever / Wiper blade & washer control
10. Steering wheel tilt lever
11. Driver's side air bag (encased in the middle of the steering wheel)
12. Cruise controls
13. Gearshift with overdrive control

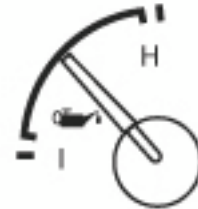
B. GAUGES, LIGHTS AND CONTROLS

Ignition Switch: There are five positions on the ignition switch that are not marked on the switch itself. The first position is the Accessory position, which allows some 12-volt accessories to be used while the engine is off. The second position is the Lock position that locks the steering wheel in place and enables you to remove the key. The third position turns the engine off without locking the steering wheel. The fourth position is the On position which makes all electrical functions active. All warning lights are lit up. The fifth position starts the engine and should be released as soon as the engine starts.

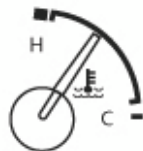
Speedometer: Indicates your vehicle speed. The larger numbers on the outside are Miles Per Hour, whereas the smaller numbers indicate Kilometers Per Hour. The speedometer also has a Trip Meter and an odometer. To reset the trip meter, simply push the “Reset” button.



The Oil Gauge: Indicates the oil pressure in the engine. This gauge should typically read about in the middle if the oil level is good. If the indicator reads otherwise, stop and check the oil level in the engine. It should be filled to the hashmark area above the “fill” line on the dipstick.



The Engine Temperature Gauge: Indicates temperature of the engine. Normal temperature is indicated if the needle is in the area between H and C on the gauge. If the needle moves higher than the H position, the engine is overheating. It is normal for the needle to fluctuate slightly when climbing hills or driving through environments such as desert climates. If the needle does not come back to normal position after resuming normal driving, stop and have the coolant in the engine checked. ***** REMEMBER: DO NOT ATTEMPT TO REMOVE THE RADIATOR CAP WHEN THE ENGINE IS HOT ***** Have a qualified technician or gas station attendant check this coolant if you are unsure. NEVER put cold water into the radiator when the engine is hot, as you may cause severe damage to the engine.



Fuel Gauge:

This gauge indicates how much fuel is in the fuel tank when the engine is running. Remember: Before refueling, you MUST turn off all appliances and close the LPG valve before entering a gas station! It is always best to not allow the gas level to reach the E position. Remember, the generator runs off the same gas tank as the engine and will not start if you have below ¼ tank or less.

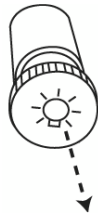


Battery Condition: Shows the voltage of the battery when the engine is running. Normal position for this gauge is between the two hash marks on the gauge. If the gauge reads outside the two hash marks, call Roadside Assistance for help.

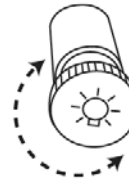


Headlight Control:

The headlight control is located on the dashboard, typically to the left of the steering wheel. It has two positions: one for parking lights, and one for headlights. Pull or turn it to the first position for parking lights. Pulling or turning it to the second position turns the headlights on. As a safety precaution, turn your headlights on at dusk, or during inclement weather.



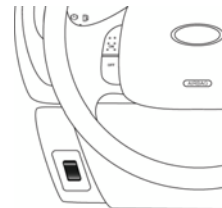
Or...



Headlight Highbeam Control: The turn signal lever on the left of the steering column controls the headlight highbeam. Pushing it forward activates the highbeam whereas pulling it towards you deactivates the highbeam.

Emergency Start Switch:

The emergency start switch is located on the dashboard to the left of the steering column. This switch is used in the event that the engine battery is unable to start the engine. This switch utilizes the “house” battery to start the engine. This is another reason why it is a good idea to check the condition of the house battery frequently.



Steering Wheel Tilt Lever: This lever is found on the left side of the steering column and enables you to change the steering wheel to a position where it is most comfortable for you. Pull the lever forward while moving the steering wheel. For your safety, please do not change the position of the steering wheel while driving.



Driver's Side Air Bag: The driver's side air bag is located in the steering wheel and is activated upon an impact. Please read the warning stickers located on the visor above the driver's seat concerning airbag operation.

Gearshift with Overdrive Control:

The gearshift has 6 positions of which 3 of those are drive positions. The "D" with a circle around it is for normal driving and indicates "Overdrive". The overdrive position should not be used when driving in steep or hilly terrain. The "2" and "1" positions should be used on very steep grades only and you should reduce your speed. Speed should not exceed 40 mph in "2", and 25 mph in "1". **To avoid overheating the brakes, downshift when going downhill.**



C. STARTING THE ENGINE

Start the engine as you would in any standard American car with automatic transmission. **Do not pump the gas pedal.** All of our motorhomes have a second or auxiliary battery (see below). Most of our motorhomes also have a "starter boost" or emergency start switch, usually on the left side of the dashboard, with which you can jumpstart the engine using the auxiliary battery. You do not need jumper cables for this. If the engine turns over very slowly, the engine battery is weak. Simply press this button and hold it. Then turn the ignition key. Release the button once the engine is running.

You should not run the starter motor longer than 15 seconds uninterrupted. Wait about ten seconds before trying again.

Note: You will hear warning chimes when the key is in the ignition and the driver's door is open or the driver's seat belt is not fastened. This will stop after a short time.

D. WARNING LIGHTS & BUZZERS

Warning lights may illuminate when a problem exists with one of the vehicle's functions. It is normal for warning lights to illuminate temporarily when starting the vehicle. If any of these lights remain on, call Roadside Assistance.

Service Engine Soon:

Solid illumination of the service engine soon light may indicate a problem with the engine. Call Roadside Assistance if this light does not go out after the engine is started.



Brake System Warning: This light will briefly illuminate to assure that the brake system is functional when the ignition is in the ON position. If the light does not illuminate, or if it illuminates after the parking brake is released, call Roadside Assistance. This could be an indication that the brake fluid is low, or of some other malfunction. This should be addressed immediately.

Anti-lock Brake System (ABS): If the ABS stays illuminated or continues to flash, a possible problem has been detected. Call Roadside Assistance right away. Normal braking is still functional unless the brake warning light is also illuminated.

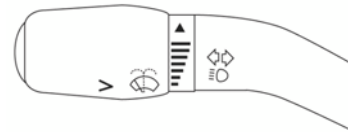
Buzzers (or chimes) are reminders of certain functions such as fastening your seat belts, keys left in the ignition or leaving your headlights on after the ignition has been turned off. If you hear a buzzer or a chime, check these functions.

E. TURN SIGNALS, CRUISE CONTROL & EMERGENCY FLASHERS

Turn Signal Lever/Wiper Blade & Washer Control: The lever on the left side of the steering column controls the left and right turn signal and the wiper blade/window washer function.

Pushing the lever down, indicates a left turn, and pushing the lever up, signals a right turn. The wiper blade control is located at the end of the lever.

Turning the knob forward starts the wipers. This knob has several positions for wiper blade speed, including intermittent function. To use the washer control, push the control on the end of the lever to trigger the washer fluid.



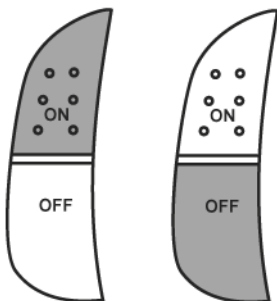
Cruise Control: For your convenience, the motorhome is equipped with cruise control, which allows you to set a desired speed to be held without using the accelerator. All of the controls for the cruise control are located on the steering wheel or on the turn signal, depending on which model you have. Do not use it when climbing steep hills or in difficult driving conditions. It is not recommended to use cruise control in conditions other than open highway driving.

In Class C motorhomes, do the following to set the cruise control:

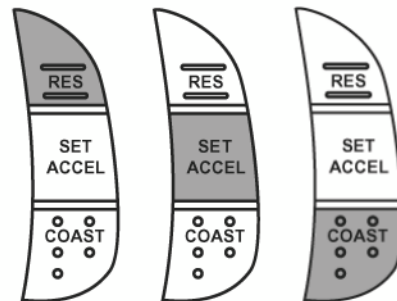
1. Bring the vehicle to the desired speed.
2. Press the **ON** button.
3. Press the SET ACCEL button momentarily. This sets the desired speed. When setting the speed, do not hold the SET ACCEL button for more than a fraction of a second. If you hold it in, the vehicle will accelerate.

To turn the cruise control off, either depress the **OFF** button or use the brake.

Left side of the steering wheel



Right side of the steering wheel

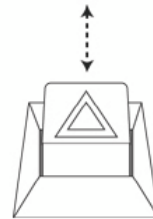


In Class A motorhomes, do the following to set the cruise control:

1. Bring the vehicle to the desired speed.
2. Slide the button on the blinker into the **ON** position and press the button on the end of the blinker. Now you can remove your foot from the gas pedal.

To turn the cruise control off, either put the switch back into the **OFF** position or use the brake.

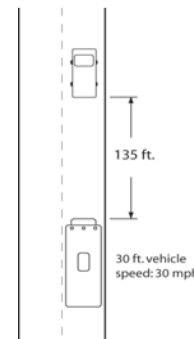
Emergency Flashers: The emergency flashers are activated from a switch on the top of the steering column. This can and should be used in an emergency to warn other drivers if your vehicle is disabled. To activate the flashers, push the switch down. To turn it off, push it down again. Keep in mind that with extended use, the flashers may run down the engine battery.



F. BRAKES

Motorhomes are longer, wider and heavier than regular automobiles. Therefore, they require much greater distances to stop. Keep this in mind when leaving distance between you and the vehicle in front of you! **DO NOT TAILGATE!**

Extended use of the brakes can result in overheating, possible loss of use and damage to the braking system. Occasional brake noise is normal and expected. If a metal-to-metal, continuous grinding, continuous squeal noise is present, or there is continuous vibration or shudder in the steering wheel, the brake linings may be worn-out and should be inspected by a qualified technician.



Four Wheel Anti-Lock Brake System (ABS): The motorhome is equipped with an anti-lock braking system (ABS) which helps you maintain steering control during fast or emergency stops by keeping the brakes from locking. You may hear noise from the ABS pump motor and you may feel a pulsation from the brake pedal. Either of these is normal. When hard braking is required, apply continuous pressure on the brake pedal. Do not pump the brake, as doing so will reduce the effectiveness of the ABS and will increase the vehicle's stopping distance.

Parking Brake: Always set the parking brake fully and make sure the gearshift is securely in the P (Park) position when parking the vehicle.

To set the parking brake, press the parking brake pedal down until the pedal stops. The Brake warning lamp will light and will remain lit until the parking brake is released.

To release the parking brake, pull the brake release lever located just above the parking brake on the lower part of the dashboard, or on some models, press down on the parking brake again.

G. THE TRANSMISSION

The transmission is a normal 3-speed automatic transmission with overdrive. If you have any questions about the use of your transmission, ask your check-out person or call Roadside Assistance. Note: In some models, you must depress the brake pedal to shift from park.

Use the transmission to help you while driving in the mountains. **It may be advisable to use second, or even first gear when going up or down steep mountain grades.** Remember, the transmission is designed for this type of job. **Use it!** Second gear is good not only for maintaining 25-40 mph (first gear for speeds of 20-25 mph) going up steeper hills, but also helps in slowing the vehicle when descending mountain grades. Using lower gears keeps you from having to use the brakes as often. "Riding" the brakes can cause them to overheat and feel "mushy" or soft, and seriously impair their stopping ability, putting the vehicle and occupants at risk. Save your brakes! Downshift as much as possible to maintain safe speeds ascending and descending mountain grades. Just remember to keep within speed guidelines for each gear as described above.

In the unlikely event that the motorhome has to be towed, the gearshift must be in the Neutral position.



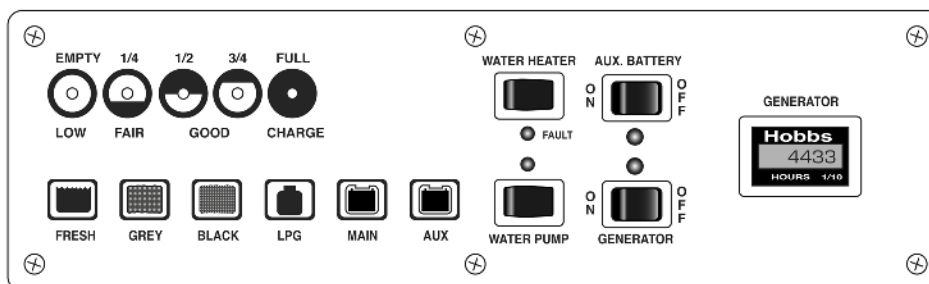
Chapter 4: The Cabin

A. THE MONITOR PANEL

The monitor panel differs slightly from model to model, but all provide you with a status of the various systems of the motorhome: fresh water tank level, gray water tank level, black water tank level, condition of the auxiliary battery and LPG

level. In addition, you can turn on the water pump, water heater and start/stop the generator.

In most models, the monitor panel is located in the kitchen. The illustration below shows a common style of panel found in most motorhomes. The switches are either rocker style or on/off. Switches for the water pump and water heater are on/off switches. The generator, fresh water, LPG, battery condition and battery condition are all momentary hold type switches.



Tank levels: To check levels in each tank, simply hold the rocker switch down until you see the level light on the panel.

<u>If the level is</u>	<u>These lights will be illuminated</u>
Empty	E
1/4 full	E and 1/4
1/2 full	E, 1/4 and 1/2
3/4 full	E thru 3/4
Full	All lights will be lit

Checking the battery condition frequently will help you avoid experiencing problems with 12v systems. "Good" indicates the coach battery has a full or nearly full charge. Checking the battery condition must be done with shore power disconnected and the generator and engine off.

The generator switch is to stop and start the generator. You will hold the switch down until the generator performs the desired function, either stop or start, then release the switch. Note: do not hold the switch down for more than 10 seconds at a time. If the generator does not start, wait 15 seconds then repeat. If it still does not start, you can attempt to start it using the switch on the generator itself. Once the generator is started, let it run 2 to 3 minutes before turning on or operating any electrical appliances.

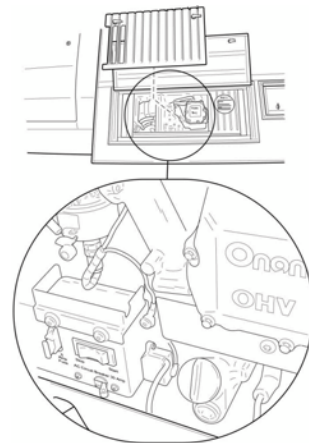
The water heater switch turns on the water heater pilot light to provide hot water. When the switch is placed in the on position, a small red light will burn a few seconds, and then go out. This means that the flame is burning. If the red light stays on, or comes back on, please refer to the Water Heater Ignition section under Propane Appliances.

B. THE GENERATOR

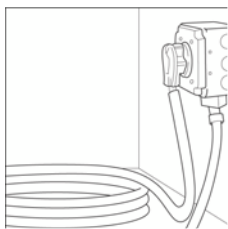
All motorhomes have a generator. It is located in an outside compartment.

The generator runs on gasoline. Our motorhomes have only one gasoline tank. It must be at least $\frac{1}{4}$ full in order for the generator to operate. This is to make sure that you do not use up all of your gasoline running the generator when you are far from gas stations.

Make sure before starting the generator that all electrical appliances (mainly the roof A/C) are turned off. Attempting to start the generator when the roof A/C is on may overload the generator causing it to blow a fuse, or worse, a circuit board.



Located inside the power cable compartment outside is an electrical outlet. For power from the generator, you need to plug the power cable into this outlet.



Likewise, for an outside power source, you need to unplug this cable from the outlet in the compartment and plug it into an outside electrical outlet. In some models you do not need to plug the cable into the generator outlet to obtain power from the generator. The switching is done automatically.

There are two switches that can start the generator: one is on the generator itself, the other is inside the motorhome. After making sure all electric appliances are off, you can start the generator. When turning the generator on, hold the switch for several seconds (but not more than 10 seconds) – do not just press it quickly and release. If the generator does not turn over (start), wait 15 seconds then repeat.

Under normal circumstances, the generator will start from the switch inside the motorhome. If it does not, you can try to start the generator from the switch on the generator itself. Some generators have a switch for winter and summer. This switch should already be set for the time of year in which you are traveling. However, if you are still having trouble starting the generator, make sure this is in the correct position.

Once the generator is started, let it run 2 to 3 minutes before turning on or operating any electrical appliances. In most motorhomes, the generator has an output of 4.0 kw. In Class A vehicles, the output is 6.8 kw.

If, while running the roof A/C using the generator, you turn the knob on the A/C from **COOL** to **FAN**, wait 2 to 3 minutes before turning this knob back to the **COOL** position. Otherwise, by not waiting, the generator may become overloaded.

C. THE AUXILIARY BATTERY

All our vehicles have two batteries. One that is used to run the chassis-related electrical system and one called the auxiliary battery that is used in the function of the systems in the living space of the RV (cabin). This auxiliary battery can also be used to start the engine in the event that there is a problem with the engine battery.

The cabin lights, fans, water pump, etc. are examples of things that can be powered with the auxiliary battery. (Note: the radio is powered by the engine battery rather than the auxiliary battery.) The engine battery and the auxiliary battery are isolated from each other, which is to say that if one battery runs down, the other one remains charged. In most of our motorhomes, the auxiliary battery is under the hood. In some models it is under the step inside the side entrance. All Class A units have two auxiliary batteries.

Check the auxiliary battery charge regularly! Never let it get completely discharged. Inside the motorhome is an indicator that shows the condition of the auxiliary battery. Both batteries are charged up automatically when the engine is running. The auxiliary battery is also charged by the converter when the generator is running, or when you are hooked up to an external source of power. However, charging with either of these two methods is very slow – the engine alternator produces 90 amps, whereas the converter in most models charges the battery at only 3 amps in Class C models and 15 amps in Class A models. **To maintain an adequate charge on the battery(ies), you should start the engine twice a day and let it run for 30 minutes.** In cold weather, you may have to run the engine more than this. If you are using the heater, please run the engine every 3 to 4 hours for approximately 30 minutes. In general, the more you use systems in the motorhome, the more you should recharge the batteries.

The batteries are charged only when the main battery switch is in the **ON** position. This switch is located inside, above the entry door or on the monitor panel. If there appears to be a battery related problem, you should make sure that the battery cutoff switch is in the **ON** position.

Since the engine battery and the auxiliary battery have the same voltage (12 v), in an emergency they may be swapped. However, the auxiliary battery is different from the engine battery. The auxiliary battery is what is called a “deep cycle battery”, which means it is designed to provide a smaller current over a longer time. **If you have to buy a new auxiliary battery, be sure you get a deep cycle battery, not a regular engine battery.** If there is any doubt, please call us first. Note: Class A units use two 6 volt batteries; these cannot be swapped with the engine battery.

Please note!: While using auxiliary batteries for cabin power is perfectly fine, it is always better to use shore power where available rather than use auxiliary batteries for cabin power. In the event that you “dry camp” (where there is no shore power), make sure that you use systems on an as-needed basis to place as little burden on the batteries as possible. Be sure that you turn systems off when not in use or not needed, as well as place the auxiliary battery switch in the **OFF** position when not charging it. A few precautions like these will extend the charge of the auxiliary battery, insuring enough power for those occasions when it is needed. A fully charged auxiliary battery will power all lights, heater and water pump only for about 4 hours before requiring recharging.

A couple of tips:

- Running the heater takes the most out of the auxiliary battery.
- Running the air conditioner requires the generator to be running. The generator will not start if the auxiliary battery is insufficiently charged.

D. SLIDE-OUTS

In order to assist you in having a trouble-free experience and to prevent damage to the slide-out compartment, please follow these steps before operating the slide-out:

Once parked, engage the emergency brake.

1. Make sure the motorhome transmission is in the “Park” position.
2. Have the engine running.
3. Make sure the leveling jacks are down and that the motorhome is level. Note: The TS model does not have leveling jacks, but the motorhome still needs to be level.
4. Make sure the driver’s seat is moved forward so that it does not interfere with the movement of the slide-out compartment.
5. Make sure there are no obstructions both inside the motorhome and outside (tree branches, etc.).
6. Do not place any heavy objects in the compartment, or allow anyone to sit anywhere inside the compartment while it is in motion.
7. If applicable, make sure the security straps have been removed before you move the compartment and hooked back up before you drive the motorhome again.
8. Push the button or turn the key to extend or retract the compartment.



E. THE ELECTRICAL SYSTEM

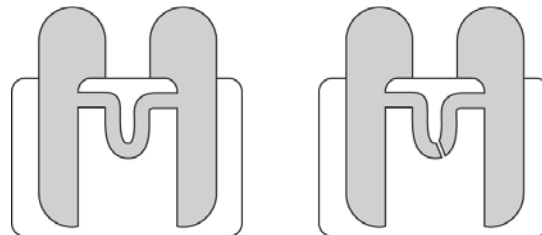
Most electrical devices in the motorhome run on 12 volt DC current: lights, fans, water pump, etc. In addition to these, there are some other appliances that can only be used with 110-volt alternating current. The roof air conditioner requires 110V AC, as does the microwave. The refrigerator, when used on the electrical setting, requires 110V AC – it will not run on 12V DC (of course, it can also be used on the LPG setting). You get 12V DC from the auxiliary battery (see section on auxiliary battery).

You must be connected with an external source of electricity or be running the generator to get 110V AC. To hook-up at an electrical source, pull the electrical hookup cable out of the side compartment on the left side of the vehicle and connect it to an outlet. It is possible that the plug will not fit and that you will need to use the provided adapter.

1. 12-volt, 110-volt: All motorhomes have two separate electrical systems: a 12-volt DC system (from a battery source) and a 110-volt AC system (from the generator or from an external power outlet. The engine battery is charged by the alternator while driving the motorhome or while the engine is idling. The engine battery runs chassis-related functions, while the auxiliary battery runs cabin-related functions. Please note: the auxiliary battery will not run the house A/C, the microwave or the 110 volt outlets without either being plugged in to shore power or without running the generator.

The auxiliary battery is charged in two ways: (1) by being plugged into an external power source, or (2) by the engine alternator while driving the motorhome or while idling. The preferred, and faster way of charging the battery is by running the engine.

2. Chassis: The chassis has a set of fuses and circuit breakers that are separate from the coach and run independent components on the engine, dash and exterior lights. If electrical components are not working, a fuse may have blown. The fuse panel is located below and to the left of the steering wheel by the brake pedal. Blown fuses are identified by a broken wire within the fuse. Check the appropriate fuses before replacing any electrical components. Note: ALWAYS replace a fuse with one that has the SAME amperage rating. Using a fuse with a higher amperage rating can cause severe wire damage and could start a fire. Please call Roadside Assistance if you suspect a problem with a fuse.



Because fuses change in color and placement from year to year, please call Roadside Assistance and refer to the fuse cover for the correct fuse amperage and position.

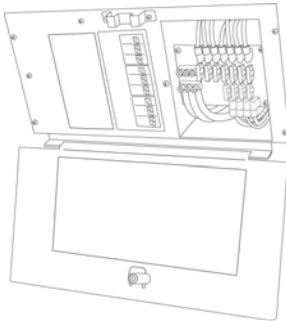
3. The Power Converter: The power converter has two functions. It runs the 110V systems when the motorhome is plugged into shore power and it also converts 110V to 12V to operate the 12V systems in the motorhome and provides a trickle charge to the auxiliary battery. The power converter has a set of circuit breakers and a set of fuses. The circuit breakers are for 110V-operated systems, and the fuses are for 12V-operated systems. Examples of these are:

110V systems: Microwave, roof A/C, 110V outlets and the refrigerator.

12V systems: Interior lights, water pump, and furnace. Slide-out (if applicable), water heater.

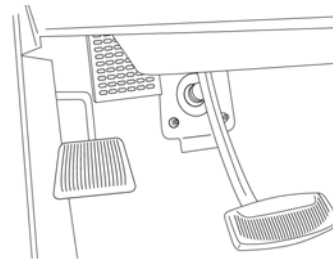
Never store flammable materials near the converter. Converters create a great amount of heat and require adequate ventilation. The power converter has an automatic fan to provide cooling. It is normal to hear this fan turn on and off.

The power converter is located at either the rear sleeping area or under the dinette or refrigerator, depending on the unit model.

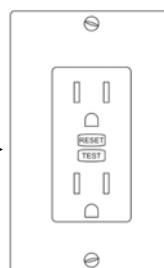
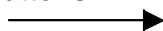


4. Fuses, GFI and Circuit Breakers:

For devices on the dashboard, the fuses are either under the engine hood or under the dashboard. For devices in the coach, all fuses are in the power converter. Roadside Assistance can assist you in locating this fuse panel. The power converter will also contain circuit breakers that control power to the devices using 110V AC. There is also a GFI (ground fault interrupter).



Test and reset buttons



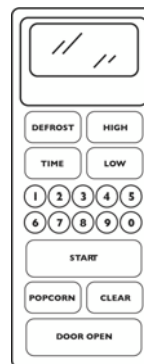
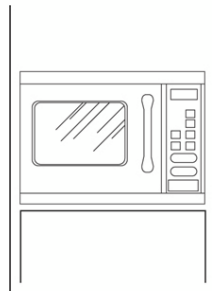
This is a special circuit breaker for AC electrical outlets. It is usually located on an electrical outlet in the bathroom or kitchen area. If you use too much current, the red button pops out and the current flow is interrupted. If this should occur, first take the load off the electrical network. Then, to reset the GFI, push the red button (RESET) back in.

If you should have trouble getting power from the generator, check the generator circuit breakers. There is a (pair of) circuit breaker(s) on the side of the generator. On some models, the circuit breaker is behind the front cover of the generator. Push them back toward the center of the coach to engage power.

5. Main Battery Cutoff: In some Class A vehicles there are two switches inside above the side door which control the DC current connection. Normally the switches must be in the ON position. To be sure, push them into the ON position and hold them for a couple of seconds. These two switches should be turned off only if the motorhome will not be used for a long time.

F. ELECTRICAL APPLIANCES

1. The Microwave: All motorhomes have a microwave. This runs only on 110V AC current. The microwave is designed so that it operates only when the door is closed. However, as a precaution, do not try to operate it when the door is open. Do not put any metal objects or containers in the microwave. Do not try to dry out clothing or newspapers or put anything other than food and microwave safe cookware in the microwave. When the vehicle is in motion, store the microwave plate in a drawer.



2. The Roof Air Conditioner: There are at least two air conditioners in all motorhomes: one on the dashboard which can be used when the engine is running, and another on the roof, which runs only on 110V AC current. In some Class A vehicles, there are two roof air conditioners. In most models, there is a switch in one of the cabinets over the dinner table area that determines which of the two you can use.

If you are running the roof A/C using the generator as your source of 110V power and you turn the knob on the A/C from **COOL** to **FAN**, wait 2 to 3 minutes before turning this knob back to the **COOL** position. Otherwise, by not waiting, the generator can become overloaded. In addition, the A/C should not be turned on for 2 to 3 minutes after first starting the generator to allow it to “warm up”.

Tip: In very hot weather, set the A/C temperature no lower than 65 to 70 degrees. A lower setting will not cool off the interior any faster and may “freeze up” the A/C cooling unit, resulting in insufficient cooling.

It is perfectly fine to run the generator while driving so that the roof A/C can be run to cool the cabin. Make sure the A/C is in the OFF position before starting the generator. The generator is not designed to start itself along with any other load. Starting the generator with the A/C on may “pop” the generator’s circuit breaker which will then require a reset.

3. The Refrigerator:

The refrigerator can be operated on either LPG or 110V AC current. **It does not run on 12V DC current from the auxiliary battery.**

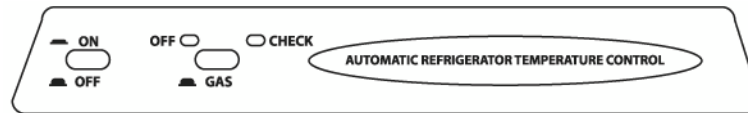
Note: When the vehicle is not in motion, the refrigerator works well only when it is approximately level. Always try to park in a level spot. Whenever you stop and plan on staying for a while, check to see if the vehicle is level with the help of the leveling bubble in the refrigerator. If the vehicle is not level, lay the leveling blocks where it is lower and drive the motorhome up onto the blocks. You do not have to make it perfect, and for a few minutes it does not matter, but if you plan on being in one spot for any length of time, the vehicle will need to be as level as you can make it. When the motorhome is in motion, it does not matter if it is level or not. Do not forget to take the leveling blocks with you when you leave.



You need to make sure the door is pushed in all the way until the door latch catches to keep the door from opening while driving. In some models, the door has a sliding latch that will “lock” the door and prevent it from opening. On other models, it has a pin at the top of the door that does the same.

The freezer compartment is on the top and is controlled by the same temperature control as the refrigerator. After the refrigerator has been turned on, it takes several hours to get cold.

Controls at the top of the refrigerator control the operation of the refrigerator.



To turn it on, simply push the **ON/OFF** button in. So long as 120v AC is not available in the unit, the refrigerator will run on LPG. If the operation mode switch is in the **AUTO** position, the refrigerator will run on LPG and automatically switch to AC current when electrical power is available and detected. To run exclusively on LPG gas, switch the operation mode switch to **GAS**. On Ultrasport models, the mode selector needs to be moved to the **GAS** or **ELECTRIC** position for it to work. These refrigerators will only run in the **ELECTRIC** mode if electrical power is available and in the **GAS** mode if LPG is available.

If you want to use the refrigerator on the electric setting, you either have to be hooked up with an external source of electricity, or turn the generator on. If you do not have any source of AC current, you can use the refrigerator only with LPG. You can use the refrigerator with LPG when you are driving, but you must not forget to shut it and the LPG main valve off when getting gasoline.

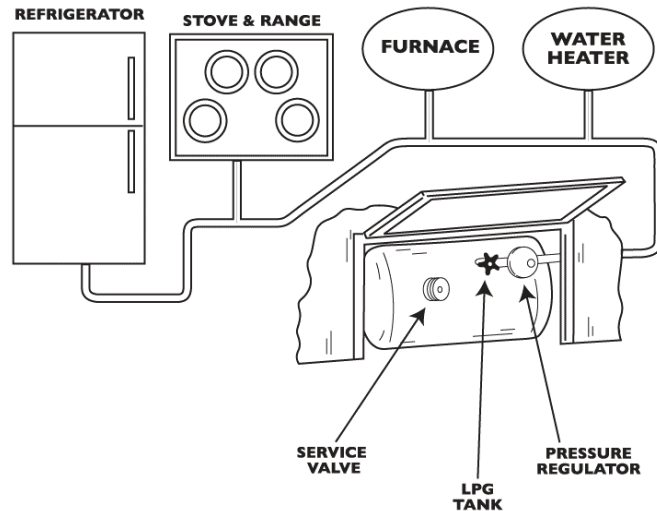
Tips for using the Refrigerator and Freezer: Generally, the refrigerator cools more efficiently and effectively when being run on LPG. Try to store only light objects in the door of the refrigerator; avoid full bottles of water, etc. since the weight may cause the door to open during sharp turns. Also, avoid setting the refrigerator temperature too low; a mid-point setting is normally sufficient to keep things cold but not frozen. The freezer temperature is automatically regulated by the refrigerator control.

Note: RV refrigerators do not keep food quite as cold as your home refrigerator. Also, try not to overpack the refrigerator as this will reduce the flow of cold air to food. In addition, the cooling ability of RV refrigerators can be adversely affected by extreme exterior temperatures.

G. PROPANE APPLIANCES

There are four appliances in the motorhome that run on LPG (Liquid Propane Gas): the water heater, the refrigerator, the gas range and the furnace.

Our motorhomes have an LPG tank, which is located in a side compartment. On the tank is a gauge for the LPG level in the tank.



There is another indicator inside the motorhome. On the tank is the main valve for LPG. **In case of an accident or a fire in the motorhome, close the main valve immediately.** We check our motorhomes for LPG leaks, but if you think you have a leak, close the main valve and call us right away. All of our motorhomes have a LPG detector. It is not illegal to drive with the main valve open. Of course, it is safer to keep the main valve closed. However if you want to use any system requiring LPG, the valve must be open. For example, if you want to let the refrigerator run in the LPG setting, the LPG valve must be open.

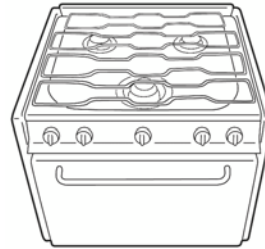
Note: If you leave the main valve open when you drive, do not forget to close it and turn off all appliances before getting gasoline!

After you have finished getting gasoline, you can drive a short distance away and reopen the main valve. If you want to use the refrigerator and other appliances after that, you have to turn them on again.

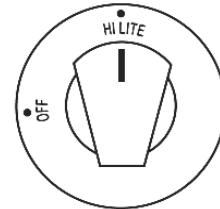
The size of the LPG tank depends on the model of motorhome. In 22 to 27' models, the tank holds 12 to 14 gallons (45 to 53 l); in most Class A vehicles it holds 25 gallons (95 l). Most people use about 5 gallons (19.1 l) per week. If you need to refill the tank, you can usually have this done at a campground and most truck stops. Often times, gas stations will offer this service as well. **Do not attempt to refill the LPG tank yourself!** Let trained personnel do it. Before they begin to fill the tank, make sure the main LP gas valve is closed and that all pilot lights and appliances are individually turned off. When not individually turned off, automatic ignition appliances may continue to spark even when LP gas is turned off at the valve. All propane tanks are designed to be filled to $\frac{2}{3}$ capacity only, to allow room for expansion. **DO NOT OVERFILL!** Overfilling can cause uncontrolled gas leaks.

1. Stove top and oven:

The gas range runs on LPG.



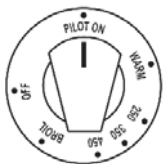
To use a burner, push the corresponding knob in, turn it counter-clockwise, and then light the burner with a lighter or a match.



It is recommended to use the long handle lighter to avoid burning your fingers or hand.

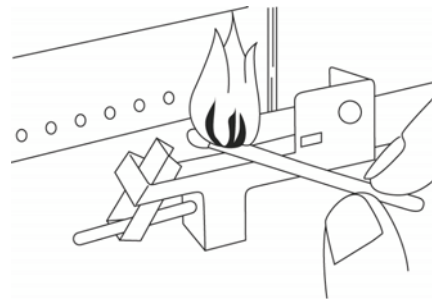
To use the oven, you have to light the pilot light first. The pilot light is located underneath the bottom tray, in the back. When you have located the pilot light, push the knob in for the oven and turn it counter-clockwise about 1/6 of the way. Light the pilot light with a long match or lighter.

You can let the pilot light burn as long as the motorhome is parked. When the motorhome is in motion, it must be extinguished.



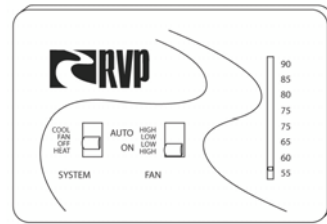
Once the pilot is burning, you can turn the knob to the desired temperature.

To turn the flame off, push the knob in, then turn it clockwise all the way to the OFF position. Put the pilot light out before you drive away. Do not cook while driving.

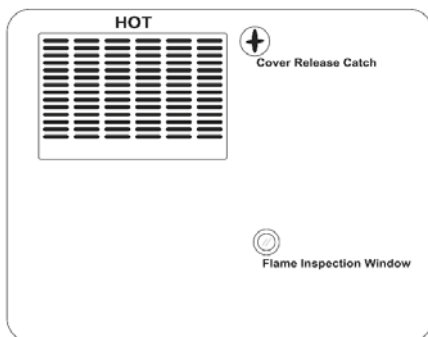


2. The Furnace:

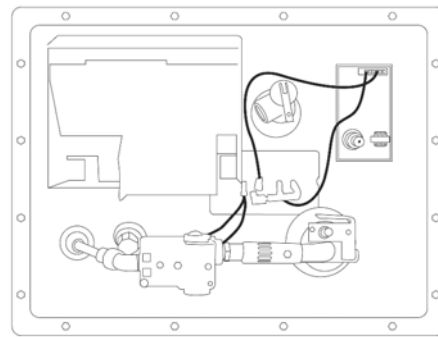
All vehicles have a space heater with automatic controls for warm air. Turn the heater on by setting the small switch under the wall thermostat to **ON**, then set the desired temperature at the top. The space heater is a large drain on the auxiliary battery. If you are going to run the space heater at night, make sure you have run the engine for 20-30 minutes before going to bed, even if you are plugged into shore power. Also, run the engine in the morning for 20 to 30 minutes to re-charge the auxiliary battery.



3. The Water Heater: The water heater is on the side of the motorhome. It holds about 6 gallons (23 l). If there is a strong wind, park the motorhome so that the water heater is sheltered from the wind. Otherwise, the flame could be blown out.



Exterior compartment view



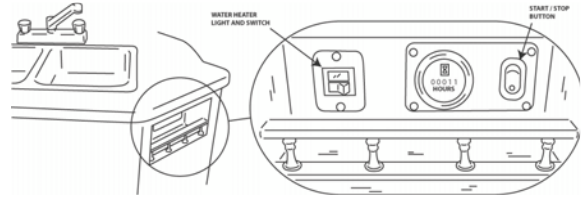
Inside the exterior compartment

The water pump must be on and sufficient water in the fresh water tank, or the city water hookup must be connected to provide enough water for the water heater.

Water Heater Ignition:

The water heater is started automatically by a switch on the monitor panel.

On Class A units, the switch may be located near the kitchen sink. On all other models, the switch is located near the side entry door. When the switch is placed in the ON position, a small red light will burn a few seconds, and then go out. This means that the flame is burning. If the red light stays on, or comes back on, one of the following is wrong:



- The LPG tank is empty
- The main LPG valve is closed.
- The LPG detector needs to be reset.
- There is air in the lines.
- The flame was blown out by the wind.
- There is no water in the water heater. In this case, turn on the water pump to pump water into the tank.
- The auxiliary battery is too weak to produce a spark.

To remove air from the lines, light the stove and let it burn for a few minutes. Then try to start the water heater again. If you cannot get the red light to go on at all, the water in the water heater is probably already so hot that the heater will not light. It should light once the water temperature falls. If it still does not light, check the fuse.

It takes 20 to 30 minutes to warm one tank filling.

Important: It is dangerous to drive with the flame burning. Please make sure that the flame is out before you drive away. If you want hot water while you are driving, heat a tank of water beforehand, then turn the water heater off. The water will stay hot a number of hours.

H. THE WATER SYSTEM

1. Fresh Water: Your motorhome has two fresh water sources: a tank for fresh water and a city water hookup. You can use the water in the tank when you are driving; the city water hookup only when you are hooked up at a campground.

The freshwater tank can be filled through an opening on the side or rear of the motorhome. Inside the motorhome on the monitor panel, is an indicator which shows how full the tank is.

The following are the fresh water tank capacities:

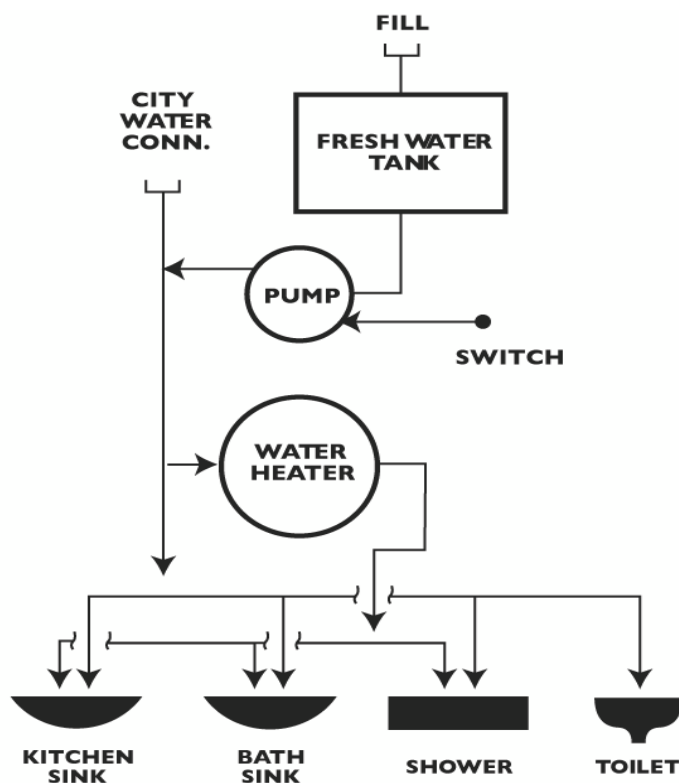
Camperhome:	30 gallons (114 l)
Class C models:	30 to 40 gallons (114 l to 151 l)
Class A models:	70 gallons (265 l)

If you want to use the water from the fresh water tank, you must turn the electric water pump on. The switch for the water pump is located either on the monitor panel, or near the kitchen sink. On some models, a second water pump switch is located in the bathroom.

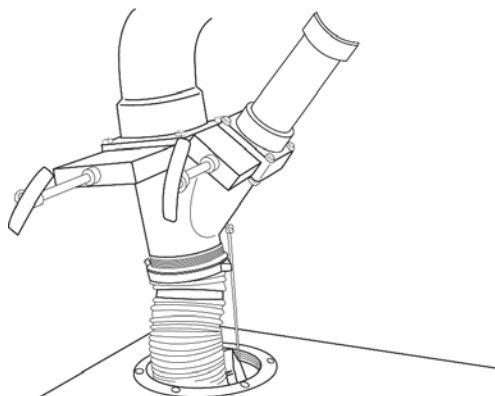
If you are at a campground that has a city water hookup, you can use this water directly. Attach the white fresh water hose to the city water hookup on the side of the motorhome. Turn the water pump off. This hook up does not refill the fresh water tank.

Caution: There are some campgrounds where the water pressure is so high that it can burst the water pipes in the motorhome, thus causing leaks. The pipes can withstand only 45 psi. It is MANDATORY that you use the water pressure regulator that is provided with the water hose. If for some reason you do not have a pressure regulator, fill the fresh water tank and use that water source. When it gets low, simply refill the tank. If a pressure regulator has not already been provided and you would like to purchase one, you can find them at most campground stores for about \$10 to \$15. Save your receipt and present it when you return for re-imbursement.

If the water in the tank goes stale, and you want to replace it, you can drain the tank. The drain valves are located in different places on the various models. On most Class C models it is located below the fill hole on the side of the unit. On Flair models, it is usually located under the rear bed. On Storm models, it is located under the floor by the water tank (access is obtained through an outside compartment door). On Bounders and other Class A models, the valve is located behind an outside compartment door. If you do drain the fresh water tank, be sure to do so in an appropriate location.



2. Waste Water: The motorhome has two holding tanks: one for “gray water” (rinse water from sinks and showers), and one for “blue water” or “black water” (from the toilet). In most models, the valves to empty the holding tanks are on the left side of the vehicle; in most cases in the back. Before you leave, make sure that these knife valves are closed and that the cap is screwed on. To open the valves, pull the sliding handles out; to close the valves, push the handles in.



Emptying the Tanks: To empty the tanks, screw the cap off the opening and attach the dump hose to it.

Connect the other end of the hose to the hole or attachment at the dumping station. Then, pull the black water valve out. This is the larger (3 ½ ") of the two valves. The smaller (2") one is for gray water. After you have emptied the black water, leave the valve open, then pull valve for the gray water out.

When all the gray water has come out, close both valves. You should let the gray water out after the black water in order to rinse the hose. Therefore, it is important to empty the holding tanks in this order: first black water, then gray water. To rinse out the black water tank: put water in the toilet by either flushing the toilet a few times, or putting water in it with a hose or bucket. Empty the black water tank again.

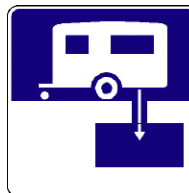
Once the tanks are emptied and the valves are closed, remove the sewer hose and screw the cap back on. Then, follow the instructions below to add chemicals.

If you are at a campground with full hookups, you can connect the dump hose for easy emptying. However, do not open the valves until the tanks are $\frac{1}{2}$ to $\frac{3}{4}$ full so that waste matter at the bottom and on the sides of the tank does not become dried out. Dry waste makes the emptying process much more difficult. If you do not have full hookups, leave the valves closed and let the waste accumulate in the holding tanks until they are $\frac{3}{4}$ full.

Inside the motorhome on the monitor panel, there are two indicators that show how full the tanks are; one for each tank. The waste capacities are as follows:

	<u>Black tank</u>	<u>Gray tank</u>
Camperhome:	4 gallons (15 l)	6 gallons (23 l)
Class C models:	23 to 25 gallons (87 to 95 l)	22 gallons (83 l)
Class A models:	40 gallons (151 l)	30 gallons (113 l)

Although most campgrounds have dump stations, if your campground does not, ask them to refer you to a nearby dump station. There are also sanitary dumps at some rest stops on interstate highways that are designated with the following sign:



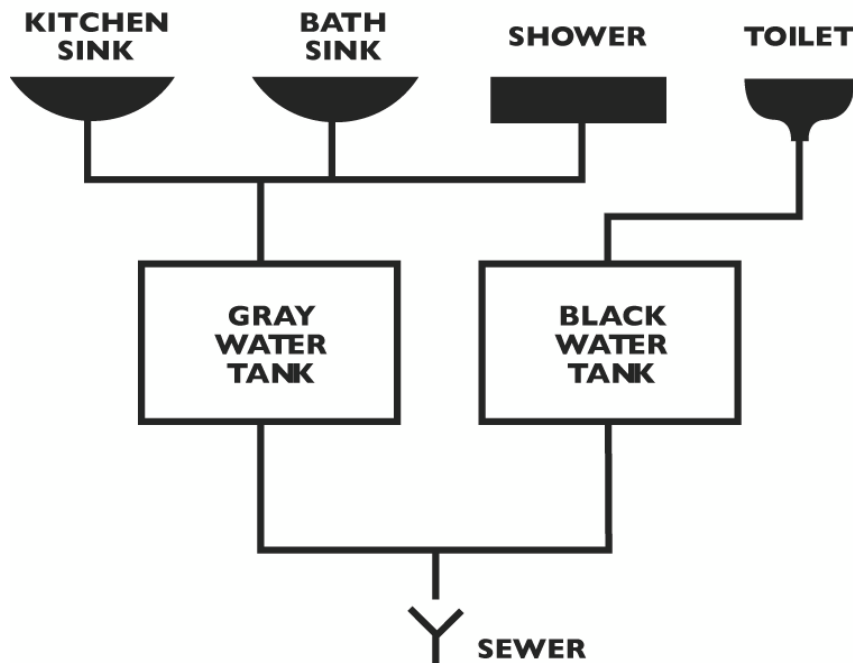
There are some gasoline stations that also have dumping stations. Emptying holding tanks in other than an authorized dump station is a health code violation and is **strictly prohibited**. The fines for illegal dumping can be up to \$1000.

Please do not use more than 1 ply toilet paper. Do not use paper towels or Kleenex or you will have trouble emptying your black water tank. Do not place any feminine hygiene products or any other foreign objects into the toilet. Please do not forget that when you return the motorhome, the holding tanks should be empty and flushed. If they are not, you will incur additional charges on your rental contract.

Adding Chemicals: Run enough water into the black water tank to cover the bottom of the toilet with about 1 inch of water by flushing the toilet, then add sufficient toilet chemicals (1 small bottle or bag – approx 8 oz.) for one tank filling. You must add chemicals to the black holding tank each time after it is emptied and before you start using it again. This will aid in the breakup of solid wastes and make emptying the tanks much easier. The tank is now ready to use again. You will receive the first batch of chemicals from us. It is part of your starter kit. Should you need additional chemicals, you can purchase them from us before you leave, or at your campground or RV supply store.

Holding Tank Tips: The holding tanks are designed to be virtually trouble free and easy to operate. However, occasionally there are a few problems that may arise. One problem is that the holding tank indicator lights on the monitor panel may read incorrectly. Another problem may be that the tanks become clogged by debris and will not empty properly. In both cases, a little preventative maintenance will stop the problems before they start. To begin with, do not empty the tanks until they are $\frac{1}{2}$ to $\frac{3}{4}$ full. This provides sufficient water to completely empty all waste material into the sewer line. It also keeps matter from drying on the metal sensors inside the tank that are connected to the monitor panel, thus avoiding erroneous readings.

Another tip: after emptying the black water tank, empty the gray water tank, but leave the black water valve open while the gray water is draining. Gray water will flow back into the black water tank helping to flush it. Do not put facial tissue, paper towels, sanitary napkins, household toilet cleaners, or ethylene glycol based or other automotive antifreezes in the holding tanks. Also, avoid pouring grease, oils or similar substances down sink drains or the toilet. Grease may coat the sensor probes mounted in the tanks thus giving a false reading on the monitor panel. If there appears to be a blockage in the drain pipes, it might help to drive the vehicle a distance so that the blockage might dislodge, before attempting to empty the tank again.



Waste Water System

3. The Bathroom: Chemicals are provided in your starter kit for the toilet. To add the chemicals, turn the water pump on and add water to the bowl. Add the toilet chemicals and flush. There may be an additional water pump switch in the bathroom in addition to the one on the monitor panel. This varies from model to model. We recommend using RV toilet paper as it is specifically designed for use in RVs. If RV toilet paper is not available, do not use more than 1 ply toilet paper as it will clog the drain system. Never use commercial chemicals to unclog the drain system as they will damage the toilet and plumbing. Call Roadside Assistance for help.

The shower head comes fitted with a on/off valve that will allow you to stop the flow of water if you so choose while you shower. This will enable you to save water.

4. Winter Use and Freeze Precautions:

Please be advised that if you are traveling to an area where there exists a possibility of freezing temperatures your motorhome must be winterized. This is due to the fact that most RVs are not designed for use in sub-freezing climates. We **STRONGLY** recommend that the unit is kept winterized until a warmer climate is reached. Failure to follow these recommendations may result in charges for damages.

Please inform our staff if you will be traveling to a climate where freezing temperatures are likely to occur.

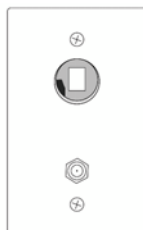
The following steps **MUST** be followed before traveling to areas with freezing temperatures:

1. All water must be drained from the fresh water tank and water lines.
2. Water Heater drain plug must be removed. Water heater valves must be put into bypass mode.
3. You must purchase 4 gallons of RV/Marine Antifreeze. You must use a non-toxic antifreeze designed for winterizing RV's and boats. **DO NOT USE REGULAR AUTOMOBILE ANTIFREEZE!!!** Pour the antifreeze into the empty fresh water tank and turn on the water pump. Allow the antifreeze to replace any remaining water in the system by opening each valve where water would normally flow. e.g. sink, toilet, shower, etc.
4. When in freezing areas, never let your holding tanks fill more than ½ tank.

Renter will be fully responsible for any and all freezing damage that may occur to the rental vehicle. If the renter travels to an area where freezing temperature exist without following the winterization procedures above, ACE will assume no liability for any loss of use, or inconvenience, resulting from a malfunction of the plumbing system.

I. **TELEVISION (if so equipped)**

1. Television Hook Up: To get a better signal, you can either hook up to a TV cable at a campground, or you can use your roof TV antenna. The external cable hookup is either at the left rear corner of the vehicle, or in a compartment on the left side. The internal hookup is generally next to the electrical outlet in the TV area.



To use the external hookup, the small black switch on the outlet plate must be in the “off” position (the red light is off).

2. Roof TV Antenna: First, make sure that there are no overhanging tree limbs. To put the roof antenna up, use the crank on the ceiling behind the driver's seat. Turn the crank clockwise to raise the antenna. To improve your reception, pull the plastic ring down slightly and rotate until the antenna is in the desired position.

To use the roof antenna, the small black switch on the outlet plate must be in the “on” position (the red light is on).

Never try to move the vehicle when the antenna is raised. To lower the antenna, pull the ring down and turn it until both arrows are pointing in the same direction. Then you can turn the crank until you hear the antenna touch the roof. If you are not sure that the antenna was lowered properly, you can check it by carefully climbing the ladder and looking up on the roof.



IMPORTANT! Be careful of overhanging tree branches when you are moving the motorhome, or driving. Even at slow speeds, a branch can become caught in the TV antenna and bend or break a wing, thus necessitating the replacement of the entire unit.

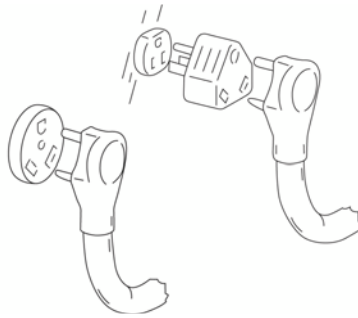
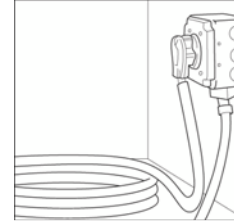
Tip: Always walk around the motorhome before leaving to check for obstructions and that the TV antenna is down.



Chapter 5: Campground Information

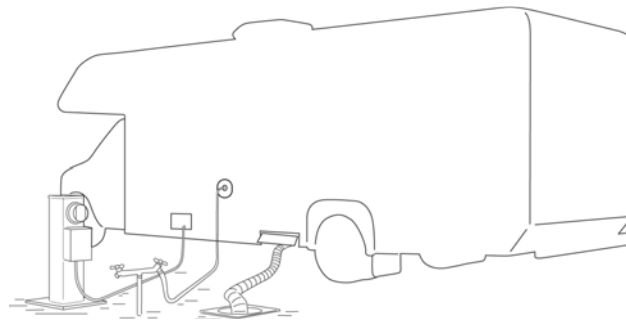
A. ELECTRIC, WATER AND OPTIONAL CABLE TV

For the most enjoyable experience, it is advisable to use whatever hookups the campsite provides. Connecting the motorhome to shore power is a simple process. Remove the shoreline cable from the compartment, and plug it into the receptacle at the site. You may need to use the adapter that is provided, in the event that the campground only has a 15-amp receptacle.



Please refer to the section for Television under the Cabin heading of this manual for instructions for Cable TV.

The water hookup is equally as easy. Just remove the water hose from the outside storage compartment, hook the one end to the hookup on the side of the motorhome, and the opposite end to the water spout at the campsite. Remember to use the pressure regulator provided with the hose. ACE RV cannot guarantee or vouch for the quality or condition of the water supply at the campground. Use of water from the onboard water system is at the customer's sole risk.



B. SEWER HOOKUP

Remove the sewer hose from the compartment and connect to the drain outlet on the motorhome. Insert the opposite end into the sewer hose receptacle at the campsite. **Keep the valves closed until you are ready to dump the tanks so that solid waste will not settle in the black water tank.**

C. DRY CAMPING (CAMPING AT SITES WITHOUT HOOKUPS)

Before you arrive at a campsite without hookups, it is best to fill your gas tank and the fresh water tank, as well as the LPG tank. Use electrical systems only when necessary. Remember, the furnace, appliances and interior lights will drain the auxiliary battery quickly. Using the generator will prevent the auxiliary battery from being drained and will recharge it. Turn off the water heater and the water pump when not in use.

D. CAMPGROUND ETIQUETTE AND SAFETY

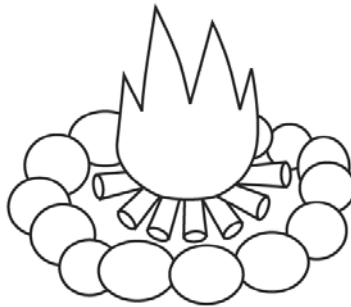
Please be a good neighbor and obey all campground rules. When arriving late, for example, use only those lights necessary to safely reach your campsite, and make as little noise as possible to avoid disturbing others. Please remember to remove all trash and do not run your generator at night. Most campgrounds have hours of operation posted for generator use.

It is best not to leave valuables in the motorhome while you are away, but if the need arises, make sure they are not left in plain site. It is also advisable to close all curtains, and make sure all doors and windows are locked before leaving. You may want to leave one light on to give the appearance of being occupied. You are responsible for all of your personal belongings.

E. A CHECKLIST:

Arriving at a campground:

1. Always use the provided regulator to hook up the water hose.
2. Always park the motorhome on a level spot. If you cannot, use the leveling blocks or jacks to level the vehicle.
3. If you want to put the roof TV antenna up, check first to make sure that there are no over-hanging branches.
4. If you are at a campground with hookups, hook the electrical, water and sewer hose up.
5. Have Fun!



While at the campground:

1. Start the engine at least once a day and let it run for 20 to 30 minutes.

Before leaving the campground:

1. Disconnect the AC power cable from shore power and stow it in the side compartment. Make sure that you have collected the adapter if it was used.
2. Make sure that the outside cable TV hookup is disconnected.
3. Disconnect all hoses and stow them away.
4. Make sure all outer compartments are closed properly and locked when possible.
5. Make sure that the valves for holding tanks are closed and the cap is on.
6. Make sure that the overhead TV antenna is down.
7. Close overhead ceiling vents.
8. Turn off the water pump.
9. For Class C models, do not forget the leveling blocks. For Class A models, visually check that the jacks have retracted properly.
10. If you have set out a reflector triangle, do not forget it.
11. Walk around the motorhome to ensure that there are no obstructions.
12. Push in the outer side step.
13. Make sure that the side door is securely locked.
14. Make sure all loose articles inside are stowed so they do not fall down when the motorhome is in motion.
15. Make sure your "load" is balanced. One of the common causes of driveability problems is incorrect loading. Store heavy items low, forward, and between the axles; lightweight items can go up high. Try to balance the load between the two sides of the vehicle.
16. Secure all cargo inside and outside so that it does not shift while driving. In Class C models, it is recommended not to store anything above the driver such as ladder, luggage, etc., as these may fall while driving.
17. **Never** carry extra gasoline inside the vehicle.
18. When traveling in winter carry chains. They can be rented for a small charge at most locations.
19. Make sure the refrigerator door is closed and latched.
20. Make sure all cabinet doors and drawers are closed properly.
21. Check your fresh water, fuel and propane levels to make sure they are adequate for your journey.
22. Check for overhead clearance.
23. Check that your side mirrors are set correctly. You should be able to see the rear wheels and lower rear corners, as well as about 50 feet behind the motorhome.
24. Latch your seat belts.
25. Release the parking brake.

While getting gasoline:

1. **Put all flames out. Turn off all appliances.**
2. **Close the main valve for LPG.**
3. **Turn the engine and generator off.**
4. **No smoking!**
5. Use only unleaded gasoline.
6. We advise that you keep an eye on the attendant or mechanic. They have been known to cut a fan belt, or puncture a tire and then perform an expensive "repair".

Before returning the vehicle:

1. Waste water holding tanks must be empty and flushed.
2. Gasoline tank must be full, or at the same level as when it was picked up.
3. Vehicle should be reasonably clean inside.
4. Remove all personal belongings. Leave any items you have rented from us in the vehicle.
5. Leave vehicle registration in the vehicle. Bring all other papers and this booklet into the office.
6. Vehicle must be returned and vacated by **11:00am** on the scheduled day of return.



Chapter 6: The Diesel Pusher

The Diesel Pusher:

The primary difference between the diesel pusher motorhome and all others is the requirement for diesel fuel. **YOU MUST NOT USE REGULAR OCTANE GAS IN THIS UNIT!!!!**

Diesel pushers have a tendency to overheat more than their gas counterparts when driving in mountainous terrain.

One other difference is that they have air-assisted hydraulic brakes as opposed to regular hydraulic brakes. Regardless of the braking system, please remember that the diesel pusher is longer and heavier than their gasoline counterparts and as a result, stopping distances will need to be increased even more.

Call Roadside Assistance if you are unsure about how to operate any particular system in this vehicle.



Chapter 7: The Fun Mover

The Fun Mover:

Depending on which model Funmover you have, it will either have a liftgate or two loading ramps. Both types will be described in this section. For your safety, please keep anyone not involved in loading the cargo area away from the liftgate area.

A. BEFORE YOU LEAVE

1. Walk around the vehicle, checking for anything left behind or obstructing vehicle movement.
2. Insure that all vehicles, supplies and equipment are properly tied down and secured for travel.
3. Always keep the cargo area ventilated.
4. Always shut off the fuel supply to the vehicles you transport.
5. Double-check that the rear cargo door is closed, latched and that loading ramps (if so equipped) are properly stowed and locked in place.
6. Make sure that the door is secured in the upright position and that the latch pins are pushed through their respective holes on both sides of the vehicle.
7. Always use a spotter to help maneuver the vehicle when backing up or negotiating in tight areas.
8. Refer to Chapter 5 "Campground Information" for further information.

B. THE LIFTGATE

1. Make sure that you are completely familiar with the safe operation of the liftgate before beginning.
2. **Always have the motorhome engine running when using the liftgate. Have the transmission set in PARK with the Emergency Brake ON.**
3. **Make sure all protective guards and covers are in place before operating.**
4. Never use the liftgate if it fails to operate correctly, or makes unusual noises.
5. Never load the liftgate with more than the maximum capacity, which is rated at 1600 lbs.
6. Never use the liftgate to transport people.
7. Cargo should be loaded as close to the center of the platform as possible and centered from side to side.
8. **Keep hands and feet away from all pinch points.**
9. Cargo should be loaded only from the rear of the platform, not the side.
10. NEVER drive with the liftgate down.

To Open:

- a. Remove the latch pins.
- b. Raise the platform until it is completely out of the resting plates.
- c. Lower the platform so guide plate rides over the cam and is below the resting plates.
- d. Lower the platform to a comfortable height for unfolding. Unfold the platform manually to the horizontal position.

Loading and Unloading:

- a. Raise or lower the platform to the desired level for loading or unloading.

Closing of the Platform:

- a. Fold the platform up manually and raise until the guide plates raise locking cam, and are free to drop into resting places.

Liftgate Transit:

- a. Lower the platform until the guide plates are in resting plates completely.
- b. Push the latch pin in hole through resting plate and cam to secure platform.

C. MANUAL LOADING RAMPS

Funmovers without liftgates have two steel loading ramps designed to hook onto the end of the cargo area to enable loading and unloading of your equipment.

To use these ramps:

1. Pull down on the rubber release latch (there is one on both the left and right side of the bumper).
2. Unlock the padlocks on both sides.
3. Swing the steel cover plates up and attach to the black plastic "hook".
4. CAREFULLY lift the loading ramps out and hook onto the steel catch at the end of the cargo area, being extremely careful not to catch fingers, or hands between the ramp and the steel catch.
5. Check the weight rating on the sticker in the cargo area for the ramp's maximum capacity.
6. Reverse this procedure to replace the ramps and travel.
7. NEVER move the motorhome with the loading ramps in their load position.
8. Always shut the fuel supply to carried vehicles off once they are loaded.
9. Always keep the cargo area ventilated.

D. LIFTGATE REMOTE CONTROL

The liftgate remote control is located in a pocket near the main entry door. Plug the cord to the remote control into the socket on the bottom corner of the right side of the Funmover.

You must store the remote control and the cord in it's proper compartment to ensure that it will not be lost or damaged. Do not allow the cord to be caught in the liftgate or allow it to lay on top of the support chains, as this will damage the cord. You are responsible for all damage to this remote control and cord.

E. THE ROLLUP DOOR

Both types of Funmover, either with a liftgate or loading ramps will have a rollup door. As with all other moving parts, please use with caution.

1. To open the rollup door, rotate the lock release handle counter clockwise until it clears the right side of the main handle.
2. Lift the main handle and rotate it counter clockwise until it is fully opened and engages the spring-loaded release latch to the left of the handle.
3. While holding the strap to the right of the main handle, open the door. Using this strap will prevent the door from rolling past it's proper open position.
4. Close in just the opposite manner.

F. SECURING YOUR CARGO

The Funmover is equipped with various devices for securing cargo. It is extremely important for both the safety of your equipment and for the Funmover that all equipment stowed in the cargo hold is properly secured.

Devices that can be used for tying down and securing are the tie-down ring clips, tie-down straps, and the flip-up wheel chocs.

Other items such as helmets, tools, toolboxes, jacks, etc. should be stored in the overhead compartments or tied down.

G. CARBON MONOXIDE DETECTOR

For your safety, the Funmover cargo area comes equipped with a carbon monoxide detector. It works the same as the detector in a regular motorhome cabin by detecting the presence of carbon monoxide. If it detects an unsafe level of carbon monoxide, it will sound.

If you should hear this alarm go off, stop the vehicle if you are in motion, turn the motor off and open the all doors and windows, both in the drivers cabin and in the cargo area to ventilate.

H. CARGO AREA EMERGENCY EXIT

The Funmover cargo area is equipped with an emergency exit should you find yourself unable to exit via the living area door or the rollup door. This exit is located on the ceiling and is used in the following manner:

1. Remove the ladder from the wall by pulling the latch until the ladder is released.
2. Pull the ladder away from the wall.
3. Pull the release handle on the cargo area roof vent.
4. Open the vent by lifting up on the lid and swing to open.



Chapter 8: Frequently Asked Questions

Frequently Asked Questions (FAQs)

For operational questions pertaining to problem-solving with individual systems, please refer to the troubleshooting guide.

Q: How many people can travel in the motorhome?

A: For your safety, we recommend only as many as there are seatbelts for. In addition, overloading the motorhome can result in system failures such as the transmission or brakes. **Note: The customer is responsible for damage that has resulted from transporting too many people in the motorhome.**

Q: Do we need to wear seat belts in the cabin of the motorhome?

A: All motorhomes come with at least 5 or 6 seat belts. This from the California Department of Motor Vehicles website on RV seatbelts: "Always wear your safety belt when driving. Even though many motorhomes accommodate passengers in places where safety belts are not required by federal law (e.g. dining table), if the area has a safety belt, wear it." Not using a safety belt increases the danger of injury in case of an accident.

It is recommended that when not walking around in the cabin, to wear the supplied seatbelt. The driver and passenger seat are equipped with a seat belt which is mandatory and should be worn at all times. Simply insert the tongue of the belt into the opposing buckle until it snaps into place.

Q: What time does the motorhome need to be returned?

A: By 11:00am on the scheduled day of return. If you think you are going to be late, please call the rental manager as soon as possible. Late charges will apply.

Q: Do I need to shut the LPG main valve when I'm getting gas?

B. YES!!!!!! Absolutely.

Q. Can I drive with the generator running?

A: Yes.

Q. How long does it take for the refrigerator to cool down?

A. Typically 3 to 4 hours keeping the door closed. Remember, the LPG must be on as well as the auxiliary battery switch.

Frequently Asked Questions (FAQs) – con't

Q: How long does it take for the water in the water heater to get hot?

A: Typically about 30 minutes.

Q. What are the tank capacities of the motorhome?

A. Please refer to the table listing this information.



Appendix: Troubleshooting

This troubleshooting section is intended to be a general guideline. For detailed help, please call our Roadside Assistance number (703) 944-6176.

System: 110V Power

Problem	Possible Cause	Check/Solution
Generator running but no 110V power in the coach.	1) Generator breaker tripped. 2) Breakers in power converter tripped. 3) Shore line not plugged into the receptacle in the shore line compartment in models without automatic transfer modules.	1) Reset the breaker on the generator. 2) Reset the breakers in the power converter. 3) Plug the shore line into the receptacle in the shore line compartment.
Plugged into shore power but no 110V power in coach.	1) Breaker at shore power hook up is off. 2) Breakers on the generator are off.	1) Reset the breaker in the shore power box. 2) Reset the breakers on the generator.
Microwave and A/C work but no 110V power to outlets.	1) GFI circuit is tripped. 2) Power converter breakers are tripped.	1) Reset the GFI outlet in the bathroom and/or the kitchen. 2) Reset the breakers in the power converter.

System: 12 Volt Power System

Problem	Possible Cause	Check/Solution
No power to appliances or amenities.	1) Low auxiliary battery. 2) Blown fuses in the battery compartment. 3) 40 amp breaker needs to be reset or needs to cool down. 4) Battery disconnection switch at side door entrance is off.	1) Run the engine battery for 20 to 30 minutes to recharge the auxiliary battery. 2) Replace blown fuses. 3) Reset the 40 amp breaker. 4) Reset the battery disconnection switch to the ON position.

System: Auxiliary Battery

Problem	Possible Cause	Check/Solution
Reading low on the monitor panel.	1) Auxiliary battery is low.	1) Run the engine battery for 20 to 30 minutes to recharge the auxiliary battery.
"Rotten egg" smell.	1) The auxiliary battery is emitting sulfur fumes due to a possible short, or overcharging.	1) Call Roadside Assistance. Open all windows and, if possible, doors and keep the unit aired out.

System: CO Detector

Problem	Possible Cause	Check/Solution
Alarm sounds and will not reset.	1) CO in coach, possibly because the engine or the generator has been running while the doors or windows were open.	1) Shut off the engine and/or the generator. Open all doors and windows and let the coach air out. Then, reset the detector.
CO detector "chirping".	1) Low 9V battery on battery operated detector. 2) Low auxiliary battery on hard-wired detector.	1) Replace the 9V battery. 2) Run the engine battery for 20 to 30 minutes to recharge the auxiliary battery.

System: Coach Lighting

Problem	Possible Cause	Check/Solution
Lights are dim or not working.	1) Low or dead auxiliary battery.	1) Run the engine battery for 20 to 30 minutes to recharge the auxiliary battery. If problem continues, call Roadside Assistance.

System: Engine Ignition System

Problem	Possible Cause	Check/Solution
Engine cranks slowly or not at all.	1) Poor engine battery condition. 2) Low charge in engine battery.	1) Clean and/or tighten the battery terminals. 2) Use the emergency start switch on the lower left corner of the dash while turning the ignition key.
Key is stuck or will not turn at all.	1) Steering wheel is turned too far to the left or right.	1) Make sure that the transmission is in the P(ark) position, step on the brake pedal and then firmly rotate the steering wheel left or right until the key turns freely.

System: Fresh Water System

Problem	Possible Cause	Check/Solution
Fresh water tank will not fill.	1) Tank is already full. 2) Fill pressure is too high. Attempting to fill the tank at the City water connection. (<u>Note</u> : on some models such as Coachman products, you CAN fill the fresh water at the City water connection)	1) Check the monitor panel reading and run water. 2) Make sure the hose is attached to the receptacle behind the "Fresh/Potable" door.

System: Funmover liftgate

Problem	Possible Cause	Check/Solution
Liftgate will not go up or down, just stuck in place.	1) Low auxiliary battery. 2) Breaker tripped for lift gate. 3) Remote cord connection loose at the coach.	1) Engine should be running any time the lift gate is in use. 2) Reset the breaker located next to or above the auxiliary battery in the generator compartment. 3) Try to wiggle the connector while pushing buttons on the remote.

System: Furnace

Problem	Possible Cause	Check/Solution
Furnace blows cold air.	1) Unit is out of LPG. 2) Main LPG valve is off. LPG detector is off. 3) There is air in the LPG lines.	1) Refill the LPG tank. 2) Turn on the main LPG valve. 3) Reset the LPG detector. Turn the furnace on and off several times, waiting 30 to 45 seconds between cycles or light the stove burners and let run for a few minutes.
Furnace does not work at all.	1) Blown fuse in power converter. 2) Low auxiliary battery. 3) Dust in the wall thermostat.	1) Replace the 15a fuse in the power converter, or the 2a fuse in the wall thermostat. 2) Run the engine battery for 20 to 30 minutes to recharge the auxiliary battery. 3) Open the cover of the thermostat. Use a screwdriver to clean out dirt particles between the contacts.

System: GCFI power outlet

Problem	Possible Cause	Check/Solution
Reset button does not pop out when tested.	1) Loss of ground fault protection.	1) Turn the generator on and reset the GFI outlet. If this does not resolve the problem, call Roadside Assistance. Do not use the outlets until problem is resolved.

System: Gauges & Instruments

Problem	Possible Cause	Check/Solution
ABS light flashing or stays lit.	1) The anti-lock brake system is disabled. Normal braking is still effective.	1) Call Roadside Assistance.
Brake light is lit.	1) Parking brake may be on. 2) Low on brake fluid.	1) Release the parking brake. 2) Check and fill the brake fluid.
ABS and brake light are both lit.	1) ABS sensor malfunction. 2) Combination of ABS problem plus park brake on or low brake fluid.	1) Call Roadside Assistance. 2) Release the parking brake and/or check and fill the brake fluid. If not resolved, get service as soon as possible.
SES light is blinking.	1) Engine mis-fire.	1) Call Roadside Assistance. Drive at a moderate speed and avoid acceleration and deceleration.
SES light stays on.	1) One of the engine's emission control systems may be malfunctioning.	1) Vehicle may be running out of fuel. Poor quality fuel or water in the fuel. Fuel cap may not have been properly installed and securely fastened. Check all of these, but call Roadside Assistance as well.
TCIL light is on or is blinking.	1) Overdrive is off. 2) Transmission malfunction detected.	1) Reactivate Overdrive. 2) Call Roadside Assistance to arrange for service.

System: Generator

Problem	Possible Cause	Check/Solution
Circuit breaker trips.	1) Overloaded circuit.	1) Turn off some of the electrical load and reset the circuit breaker.
Cranks, but will not start.	1) Not enough fuel in the gas tank. 2) Plugged fuel filter. 3) Fuel pump inoperative. 4) Bad spark plug. 5) Low oil level.	1) Add fuel to the gas tank. Must be above 3/8 tank. 2-4) Call Roadside Assistance. 5) Add 10/30W oil to the generator – do not overfill.
Cranks slowly or not at all.	1) Low auxiliary battery. 2) Load is on the generator before it is on. 3) Bad battery connection. 4) Blown fuse. 5) House A/C is on.	1) Run the engine battery for 20 to 30 minutes to recharge the auxiliary battery. 2) Disconnect the load before starting the generator. 3) Clean and/or tighten the connections at the auxiliary battery. 4) Replace the fuse on the generator control panel. 5) Turn house A/C off.
Generator runs, then surges.	1) Needs service. 2) Possible loose or worn spark plug lead.	1) Call Roadside Assistance. 2) Check spark plug leads at spark plug ignition coil.
Starts, then runs only until start button is released.	1) Low oil level in the generator. 2) Serious malfunction in the generator.	1) Check oil and add 10/30W oil if needed. 2) Call Roadside Assistance.
Stops when driving around corners.	1) Low fuel levels. 2) Low oil level. 3) Excess oil.	1) Refill the engine gas tank. 2) Add oil if necessary. 3) Reduce the oil level in the generator.

System: Holding Tanks

Problem	Possible Cause	Check/Solution
Holding tanks do not dump when valve handle is pulled.	1) Tank contents are frozen. 2) Dump valve is broken.	1) Try to dump again after you have moved to a warmer climate. 2) Call Roadside Assistance.
Monitor panel says tank is full, or registers more than empty after you have dumped them.	1) Non-RV toilet paper has been used and is now hung up on the sensors, or grease or oil has been poured down the sink and is coating the sensors.	1) Do not run water into tank for a while to let the sensors dry out, then try again. If still not reading properly, try to flush tanks out several times at a dump station.

System: Kitchen Sink

Problem	Possible Cause	Check/Solution
Little or no flow.	1) Water pump is off. 2) Unit is out of fresh water. 3) Clogged aerator.	1) Turn the water pump on at the monitor panel. 2) Add water to the fresh water tank. 3) Unscrew the faucet aerator and flush out or leave off if needed.

System: LPG System

Problem	Possible Cause	Check/Solution
LPG not flowing to amenities.	1) Tank main valve not open. 2) LPG detector switch off or dead battery. 3) Low pressure in LPG tank. 4) Outside temperature is too cold.	1) Turn on the main valve. 2) Turn LPG detector on or replace battery. 3) Add LP to the main tank. 4) Move to a warmer location until the propane warms up.
LPG detector alarm activated or will not reset.	1) Low auxiliary battery. 2) Combustible fumes in area of detector.	1) Run the engine battery for 20 to 30 minutes to recharge the auxiliary battery. 2) Air out the motorhome and try to reset the detector. If unable to reset, call Roadside Assistance.

System: Microwave Oven

Problem	Possible Cause	Check/Solution
No clock or light.	1) No 110V power to the microwave.	1) Turn on the roof A/C. If the roof A/C works, check the breakers in the power converter. If the roof A/C does not work, troubleshoot the 110v system. If the roof A/C works and the breakers are OK, check in the cabinet next to the microwave to see if it is plugged in.
Clock and light work but unit does not heat food.	1) Microwave is defective.	1) Call Roadside Assistance.

System: Monitor Panel

Problem	Possible Cause	Check/Solution
No lights on panel.	1) Blown fuse. 2) Dead auxiliary battery.	1) Check the fuse at the power converter marked "Monitor Panel". Change if necessary. 2) Check and charge the auxiliary battery.

System: Oven

Problem	Possible Cause	Check/Solution
Turned knob but oven won't light.	1) Pilot light must be lit manually first.	1) Turn oven knob to "Pilot", then use match or lighter to light pilot light.

System: Refrigerator

Problem	Possible Cause	Check/Solution
Norcold shows "A" on display screen.	1) Freezer operative, refrigerator is inoperative.	1) Reset refrigerator by turning off and on. Reset the climate control switch inside the freezer door frame. If problem persists, call Roadside Assistance.
Norcold shows "F" on display screen.	1) Complete unit failure.	1) Call Roadside Assistance.
Norcold shows "H" on display screen.	1) Humidifier is inoperable.	1) Call Roadside Assistance.
Refrigerator does not turn on.	1) Low or dead auxiliary battery. 2) Motorhome is not level enough.	1) Run the engine battery for 20 to 30 minutes to recharge the auxiliary battery. 2) Level the unit until at least 70% of the bubble is in the circle.
Refrigerator does not work in either mode.	1) Element in the refrigerator is not cooling. 2) Vents are blocked.	1) Cooling grill is not attached. Attach it. 2) Un-block the vents.
Refrigerator does not work in LPG mode.	1) Low auxiliary battery. 2) Out of LPG. 3) LPG turned off. 4) LPG detector is off. 5) Air in the line.	1) Run the engine battery for 20 to 30 minutes to recharge the auxiliary battery. 2) Refill the LPG tank. 3) Turn on the LPG valve at the tank. Check that the manual shut off valve is open. 4) Reset the LPG detector. Cycle refrigerator on and off several times, wait 30 seconds between cycles. 5) Turn the stove burners on for about 1 minute to push the air out of the line.
Refrigerator does not work in 110V mode.	1) No 110V power to coach. Circuit breaker tripped.	1) If the microwave clock is on, check the breaker for the appliances in the power converter. If not, troubleshoot the 110V system.

System: Rooftop A/C

Problem	Possible Cause	Check/Solution
A/C doesn't run.	1) No 110V to rooftop A/C.	1) If the microwave works, check the breaker for the roof A/C in the power converter. In ducted-type A/C's only, you may also check the 2a fuse in the wall thermostat. If the microwave does not work, troubleshoot the 110V system. Note: In Class A models with 2 roof air conditioners, you should only run one at a time.

System: Shower

Problem	Possible Cause	Check/Solution
Shower faucet turned on but no water coming out.	1) Knob at back of shower head is turned off. 2) Other fresh water problem.	1) Turn knob on the back of the shower head. 2) Troubleshoot the fresh water system.
Water backs up into shower while running kitchen or bath faucet.	1) Gray holding tank is full.	1) Empty the gray water holding tank.
Water backs up into shower while using it.	1) Gray holding tank is full. 2) Shower drain basket is plugged.	1) Empty the gray water holding tank. 2) Clean the shower drain basket.

System: Stove top

Problem	Possible Cause	Check/Solution
LPG flowing out of the burner, but igniter will not light LPG.	1) Manual igniter inoperative. 2) Igniter lead has come off the igniter.	1) Use matches/lighter or call Roadside Assistance. 2) Lift stove top up and reconnect the orange lead to the back of the igniter, or use matches or a lighter.
Stove burner will not light.	1) LPG not getting to the stove.	1) Troubleshoot the LPG system.

System: Toilet

Problem	Possible Cause	Check/Solution
No water to the toilet.	1) Various.	1) Troubleshoot the fresh water system.

System: Water Heater

Problem	Possible Cause	Check/Solution
Red light stays on.	1) No LPG getting to system. 2) Pilot is malfunctioning.	1) Check to see if LPG is present at the stove. If not, troubleshoot the LPG system. 2) Check the diode connection at pilot light.
Red light does not come on at all.	1) Water heater was on and water is now hot. 2) Fuse blow in the power converter panel.	1) Check faucet for hot water. 2) Replace the 5a fuse in the power converter.
Water heater leaks at the relief valve.	1) This is common due to expansion after the water heater heats water up to operating temperature. Debris in the relief valve.	1) Use some hot water. This should relieve pressure. If this does not resolve the problem, call Roadside Assistance.

System: Water Pump

Problem	Possible Cause	Check/Solution
Water pump not causing water to move through system.	1) Dead or low auxiliary battery. 2) Fresh water tank may be empty.	1) Run the engine battery for 20 to 30 minutes to recharge the auxiliary battery. 2) Fill the fresh water tank.

System: Jacks/Levelers

Problem	Possible Cause	Check/Solution
Jacks are retracting	Engine not running, parking brake not engaged, slide outs are extended or touch pad for jacks is off.	Make sure your engine is running, the parking brake is applied, the slide-outs are in and that the control panel for the jack is on
	System may need to be reset	<p>For the grey "Atwood Levellegs" Touchpads: Put your foot on the brake and then shift the gear into "D" while keeping your foot on the brake. An Alarm will sound and the jack should retract. Please put the gear back into "P" and wait until all jacks are fully retracted and the wait-light stop flashing.</p> <p>For the other motor homes with the black touchpad check your unit number first. If the second digit is an 8: Push and hold all your four direction button until a beep tone sounds. Then push "Retract All" and wait until all jacks are fully retracted and the wait-light stops flashing. If the second digit is a 9: Push and hold the ON/OFF Button until a beep tone sounds. Then push "Retract All" and wait until all jacks are fully retracted and the wait-light stop flashing.</p>

System: Slide-Out's

Problem	Possible Cause	Check/Solution
Slide-Out is not retracting or Extending	Engine is not running, parking brake not engaged, AUX battery is off, RV not leveled, Slide area is not free or heavy objects are laying on the slide-out.	Make sure your engine is running, the parking brake is applied, the AUX battery must be on and charged, slide-area must be free, the RV leveled and there can't be any heavy thing on the slide-out (like a person sitting on the bench)
	Fuse is burnt	Check the slide-out fuse. It's usually underneath the top-step next to the AUX battery. Call Roadside if you need assistance finding it.
	Unit number is starting with "396"	The engine must be off on this particular unit.

System: LPG-Alarm

Problem	Possible Cause	Check/Solution
Propane Alarm comes on	Propane leak in LPG system	Check if you can smell propane. If yes, please shut off the LPG valve at the tank and call Roadside for service.
	AUX battery low	If there is no propane smell, check for your AUX battery. Charge it by running the engine for 30 minutes or longer if it is low.
	False Alarm	Unscrew the propane Alarm and unplug it for 20 minutes to reset it then put it back on.

System: Toilet

Problem	Possible Cause	Check/Solution
No water for flushing	Fresh water tank empty	Fill up water tank
	Water pump off	Turn on water tank
Waste does not go into the tank	Black water tank full	Dump black water tank.
	Toilet clogged	Care fully stick with the handle of a broom in opening of trap excess and push the blockage into the black water tank. To prevent this problem in the future, only use RV Toilet paper
2009 Bounder only : Rear toilet does not flush	The water pump for the vacuum toilet was not turned on.	Turn the switch next to the toilet on. Wait until the green light comes on, then flush.

System: Electric Steps

Problem	Possible Cause	Check/Solution
Steps are not retracting when closing door.	“Steps”-Switch is off	Turn the switch on. It should still retract when you turn on the engine.
	AUX battery low or off	Turn on the AUX battery and make sure it is charged.
	Magnet at the door fell off	The magnet at the screen door is supposed to align with the door frame (does not need to touch). Realign it.
	Fuse is burnt	Underneath the top step are the fuses for the steps. Call roadside if you can not find it.

System: TV

Problem	Possible Cause	Check/Solution
No power to TV at all	Generator not turned on, or not hooked up to shoreline	Turn on the generator or plug the shoreline into the campground. If that does not work, troubleshoot the 110v system
Can't watch DVD	Setup is wrong	Push all buttons on DVD, and then check on channel 3 or 4. If you can't find it, do a channel scan on the TV
Can't watch TV via cable	COAX cable not hooked up to the campground	Connect the COAX cable. Then do a channel scan. Button an control board must be pushed to TV or VCR
Can't watch TV via Antenna	Bad reception or no channel available	Turn the antenna on the roof for better reception if you have bad signal or do a channel scan first if you don't get any channel at all buttons on TV must be pushed on cable. Check if the green light for the antenna boost is on (in Fiestas and Bounder's only)
Remote control	Not working	Use the buttons on TV to switch between channels. Change the batteries of the remote control.

Please note: TV systems vary from RV to RV . if you can't fix your TV issue by using these tips, then call Roadside and they will try to help you. If they can't help you over the phone you would need to visit ACE RV location. There is no mobile service available for TV issues and there won't be any compensation if it does not work.

Problem: Tire Blowout

In case of a Tire-Blowout, always give Roadside Assistance a call. Roadside will find a service who will change the Tire. Do not attempt to change the tire on your own.

If you have a Tire-Blowout after Roadside is closed, leave a detailed message with your phone number and unit number (on your keys) and they will call you back first thing in the morning and send help.

If one of the front tires is flat, pull over to the side of the road and do not attempt to drive any further.

If you have AAA you can call them and ask for help.

If one of the dual-tire got flat you can also drive slowly to a safe place to wait for service. If you have AAA you can call them and ask for help.

If you are in danger, you can call 911 for Emergency Assistance.

Tire repair are the responsibility of renter. In the event of faulty tire (which will be determined upon return) ACE RV will compensate for repairs. It is necessary to return the tire and receipt for any consideration.

Problem: Engine failure

Please call Roadside Assistance when you experience an Engine or Transmission failure.

If you break down after Roadside is closed, leave a detailed message with your phone number and unit number (on your key) and one of our road side Agent will call you back first thing in the morning and send help. Pull over to a safe place if possible. If you have AAA you can call them and ask for help.

If you are in danger, you can call 911 for Emergency Assistance.

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